THIS WEEK'S National Petroleum NEWS

Coming Meetings

1932

Independent Petroleum Association of America, Mayo Hotel, Tulsa, Nov. 14.

American Petroleum Institute, annual meeting, Rice Hotel, Houston, Tex., Nov. 15, 16, 17.

Nebraska Petroleum Marketers, Hotel Fontenelle, Omaha, Dec. 6, 7, 8.

Independent Petroleum Association of Texas, Texas Hotel, Fort Worth, Dec. 9.

Rocky Mountain Oil and Gas Association. Rainbow Hotel, Great Falls, Mont., December (dates not set).

1933

Northwest Petroleum Association, North Dakota Division, Waldorf Hotel, Fargo, N. D., Jan. 9, 10.

Northwest Petroleum Association, Minnesota Division, Lowry Hotel, St. Paul, Jan. 12, 13.

Ohio Petroleum Marketers Association, Deshler-Wallick Hotel, Columbus, O., Feb. 15, 16, 17.

American Association of Petroleum Geologists, Houston, March 23, 24, 25.

National Petroleum Association, Cleveland Hotel, Cleveland O., April 20, 21.

American Society for Testing Material, Stevens Hotel, Chicago, June 26 to 30.

NATIONAL PETROLEUM NEWS

Vol. 24 No. 45

Published by
The National Petroleum Publishing Co.
1213 W. Third St., Cleveland, O.
Tel., CHerry 7672
Branch Offices:

TULSA,
904 World Bldg., Tel. 3-7132.
NEW YORK,
342 Madison Ave., Tel. Vanderbilt 3-3950 and 3-3951.
HOUSTON,
303 West Drew Ave., Tel. Lehigh 5852.
CHICAGO,
35 E. Wacker Drive, Tel. State 4141.

Subscription rate $3.50 per year, U. S. and Mexico; Canada $6 (including duty); $5 Foreign countries. Current copies 10 cents; for back issues more than two months old 25 cents per copy.

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General

Texas Legislature in Special Session to Amend Conservation Law 7
Many Station Rents Cut in Detroit Despite Complex Land Deals 11
Railroads Adopt Plans to Increase Competition with Other Causes 13
Discounts Widened to Commercial Buyers on Atlantic Coast 14
U. S. Duty Disturbs 10 Per Cent of World Gasoline Movement 14
Indiana Marketers Consider Co-operative Buying 15
Three Guest Speakers Announced for Institute Meeting 16
Late Production News 18
Improved Earnings Reported by Most Companies in 9 Months, 1932 20
Gas Tax Division Under Fire in Indiana Politics 46

Engineering

New Rotary Type Plate Improves Vacuum Fractionating Column—*By D. B. Keyes* 22
Refining Industry Continues Active Development During Depression 27
Visiting Around the Refineries 28
New Refining Patents 52

Merchandising

Principles to Follow in Making Service Station Merchandise Displays Practical Aids in Selling 30
Human Curiosity Utilized by Texas Co. in Exhibit to Advertise Its Oils 35
Merchandising Ideas 38
Oil Companies Spend $5½ Million for Radio Network Time 41

Markets

Chicago; All Grades Fuel Oil Advance 45
Mid-Continent; Trading Quiet; Prices Generally Steady 47
Refinery Price Tables 48, 50, 51
California; Domestic Prices Slightly Lower 54
Pennsylvania; Lubes Quiet at Lower Prices 55
Eastern; New England Gasoline Prices Higher 56
Wax; Prices Steady 56
Complete Seaboard Prices 58
Tank Wagon Price Tables 60, 61
Aviation Gasoline Prices 61
Crude Oil Prices 63, 65

Departments

The Editors' Viewpoint 9
The Panorama of Petroleum in the Mid-Continent 17
The Mid-Continent Skyline 21
Visiting Around the Refineries 28
New Refining Patents 52
New Stations Building 54
On the Lazy Bench 57
Oil Trademarks for Copyright 64
New Patents 71

New N. P. N. Editorial Feature

IN THIS issue NATIONAL PETROLEUM NEWS introduces a service for heads of marketing companies and station supervisions and operators, in suggestions for display of accessories and specialty products at stations. Systematic diplay of items carried is necessary in this wider field of merchandising into which the oil companies are venturing.

¶The next instalment of this new service, which is planned for early in December, will include items which may be featured during the Holiday season. The displays suggested will lend themselves to any general decorative effort at the station and the items selected will be those which can most appropriately be pushed at this station.

OIL COMPANY HEADQUARTERS

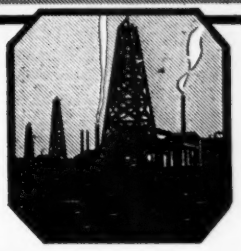
Imperial Oil Limited

THE home of Imperial Oil Ltd., principal oil company operating throughout Canada, is at the corner of King and Church streets, in Toronto. Imperial Oil and its subsidiaries occupy the entire building.

The building is of steel with terra cotta tie arches and concrete fill. The main entrance hall is of Tavernelle marble and bronze with Tennessee marble floor. The bedroom on the top floor is in English style, with quartered oak floor, wells paneled with English oak. In the basement, in addition to mechanical equipment and the vaults, are squash courts, gymnasium, locker rooms and showers.

NATIONAL PETROLEUM NEWS

Published at
1213 W. Third St.
Cleveland



Branch Offices
Tulsa, New York, Houston, Chicago

Vol. 24 **CLEVELAND, NOVEMBER 9, 1932** **No. 45**

Texas Legislature in Special Session To Amend Conservation Law

By Telegraph
HOUSTON, Nov. 8

THE Texas legislature is now in special session, on call of Gov. Sterling, to enact a market demand provision into the state's conservation statute, under which proration of crude production in Texas oil fields is enforced.

If the bill introduced, or something on the same order, becomes a law, it will make possible the administering of proration more equitably and more effectively throughout the important oil producing territory of the southwest.

Latest reports from the legislature are that the house committee on oil, gas and mining has voted out favorably a bill which would give the Texas Railroad Commission the authority to consider market demand and economic waste in its orders governing the state's oil production. The senate has almost an identical bill before it and the general feeling is that the changes desired by the majority of operators will become incorporated in Texas law.

The present emergency attempt at legislation comes as a result of a decision of a Texas federal court, Oct. 24, which declared invalid the orders of the railroad commission, under which it was endeavoring to restrain East Texas production to a maximum of 335,000 barrels a day.

The court held these orders were based on market demand for crude from this area, rather than on evidence of physical waste, which, in the present statute, must be the basis of proration orders.

TO make it possible for the state agency to give any consideration to current demand for oil from East Texas, or any oil field in the state, in preparing proration orders, a change in the law was necessary. Proration orders issued on any other basis, it is believed by most operators, would not allow the degree of regulation of production in East Texas needed for continued stability in the southwest.

The new bill is the present Texas statute, except that it incorporates provisions of the Oklahoma law which allows the degree of regulation of production imposed on oil fields to be based on the demand from various sources for that oil. The present law allows curtailment of production only to prevent actual physical waste of oil or gas.

Supporting the changes in the new bill are the Texas Railroad Commission, the state's agency in regulation of oil and gas production; the Texas Oil & Gas Conservation Association and East Texas independent operators, some of whom in the past, were against giving the state such additional regulatory authority. Major oil companies have as yet taken no stand on the proposed legislation, but many in the past have supported the market demand principle in enforcing proration.

Appearing against the bill in the senate Monday was Underwood Nazro, vice president of the Gulf Production Co., who asserted the principle of attempting to fix the price of oil by legislation was wrong and that producers should accept the fact that value of crude is determined by supply and demand. Others appearing against the bill were a representative of a Dallas association of gasoline consumers, the head of one of the small East Texas refining companies and a professor of law at Baylor University.

THE special legislature was called into session Nov. 3, after a federal court had ruled Oct. 24, in a test case brought by East Texas independent operators, that the present proration orders in East Texas are based on market demand rather than physical waste and hence are invalid. The only business before this legislature is the oil legislation, hence the nature of the

new law in Texas will probably be known in a few days.

In the meantime, by general agreement, proration in East Texas, and other Texas fields as well, continues under the old orders of the railroad commission. General feeling among operators and citizens in the East Texas oil territory is such that any effort to flow wells at their full production would be opposed, perhaps by force. The number of state militia in the district has been increased and, so far since the court's decision, the field has operated orderly under the maximum per well restriction of 40 barrels a day imposed by the old order of the commission. There are now about 8750 wells in the territory.

As far as a single pool in Texas, or any other state is concerned, it might appear a minor and unimportant difference whether the degree of regulation of production is based on whether some market can be found for every barrel of oil taken from it, or on whether there is actual waste of the oil or gas, which would take place were there no disposition of the oil either in marketing channels or in storage, or if gas pressure were unduly lowered because of the rate of production.

However, state officials in the oil producing region and the majority of oil operators as well are coming to recognize that proration cannot be applied equitably through considering the interests of each single pool by itself. The market for crude from various pools overlaps and even the market for crude from entire states, such as Oklahoma and Texas in the southwest. Crude from a pool under only a small degree of proration may take up the normal market of another pool operating under a severe degree of restriction.

Some balancing of general needs or market demand for crude from a general producing territory, such as the southwest, against the sources of supply is necessary if operators in some pools, or in one entire state, are not to suffer unduly. Such a balancing of supply and demand is proposed through the present Oil States Advisory Committee and it would be one function of the interstate compact of oil producing states, a bill for the creation of which was introduced in the last session of Congress.

The state of Texas, if it adopts a conservation law similar to that in Oklahoma, puts itself in a position where it can fit into the general proration program much more effectively than at present, when restrictions can be imposed in individual pools only on the grounds of physical waste.

The hand of those who are working for market demand as the basis of proration was strengthened by the decision of the U. S. Supreme Court in the case of Oklahoma vs. the Champlin Refining Co. last May. Here the court upheld the market demand feature of Oklahoma's proration law, stating it did not constitute price fixing and was a valid delegation of power to the Oklahoma Corporation Commission, which administers proration in that state.

Gov. Sterling brought attention to the Champlin decision in his call to the present special session of the Texas legislature, pointing out that the recent federal court ruling involving the Texas proration program did not hold the Texas statute invalid, but only the orders under which the Texas Railroad Commission was administering that law, on the grounds that they were based on market demand and the state law provided evidence of physical waste must be the basis of its orders. Said the governor:

". . . it is apparent that in order to conserve the state's greatest natural resource—oil and gas—and in order to empower the railroad commission to take into consideration as an element of waste the production of oil or gas beyond the reasonable market demand therefor, it is necessary that our present conservation laws be amended so as to authorize the railroad commission to take into consideration as an element of waste the production of oil or gas beyond the reasonable market demand therefor."

The law under which the Railroad Commission of Texas has functioned since last September, was adopted Aug. 12, 1931, by the first called session of the 42nd legislature. Previously, a federal court had found for the plaintiff when the McMillan Petroleum Co. brought suit against the commission to enjoin enforcement of its orders in East Texas. The court held that the commission had written orders of a character not authorized by the Texas law and that it was in effect attempting to regulate production to market demand.

To meet the situation brought about by the McMillan decision, Gov. Sterling called the special legislature of 1931. It was supposed that market demand provision for regulation of production would be a part of the new law. Early in the session, however, the governor let it be known that he would veto a law carrying such provision.

Now, in calling the present special session, the fourth since Gov. Sterling assumed the office in January, 1931, the governor asks for a market demand provision.

The bill placed before this session on Nov. 4, when a quorum—two-thirds of each house—had put in its appearance, begins by amending the present law, removing from the first section the prohibition against economic waste.

Other definitions of waste in the new bill follow the present law closely, after removal of the market demand barrier, but

(*Continued on page* 10)

State Court to Review Texas Common Purchaser Law

HOUSTON, Nov. 5.—Advising from the bench that validity of the Texas common purchaser law should be determined in the state court, a three-judge federal court at Austin, Nov. 4, stayed proceedings of a suit brought by the Humble Oil & Refining Co., attacking constitutionality of the statute.

The Humble will be permitted to continue its part purchase and part storage of crude oil production pending a state court determination, the federal court maintaining a temporary restraining order it had previously granted.

The federal court action protects the Humble from infliction of ruinous penalties in case the final decision should be against the corporation.

THE EDITORS' VIEWPOINT

The Responsibility for Low Refinery Prices

By Warren C. Platt, Editor

ABOUT a month ago Raymond Brin, of the Primrose Petroleum Co. of Dallas, Texas, sent to the trade the following circular of which he says he is the author:

"The Power Behind the Downward Market!"

"Trade Papers that quote the market on Petroleum Products are the power behind the downward market. A buyer considers these Trade Papers a guide in his buying. He prides himself in his ability to buy lower than his competitor. He gauges his ability to buy, according to the price he is able to get under the price named by these Trade Papers.

"When he gets a contract at ¼ or ½c per gallon under the price named by a Trade Paper, he uses this to hammer down the spot market, offering to buy on the spot market at a cheaper price than his contract price. In this way he saves himself thousands of dollars, at the expense of the Refining Industry.

"When he is successful in getting someone to sell him on the spot market at a cheaper price than his contract price, he reports it to the Trade Paper, and the Trade Paper in turn reduces the price that it is carrying.

"More damage has been done to the Refining Industry during the past five years by these Trade Papers than anything else. There is no upward market when the buyer uses a Trade Paper as a guide.

"The Refineries themselves are responsible for this downward market. They have considered these Trade Papers' prices too seriously.

"Now is the time for Refiners to get some courage and demand a fair price for their products, and to ignore entirely these Trade Paper quotations.

"Refiners should sell their products from day to day, instead of following the least line of resistance—making Trade Paper Contracts.

"This is the only thing that will again make the Refining business profitable."

WHAT Mr. Brin says as to the practice of the jobbers and refiners is true.

What he says as to who is responsible for the low markets, when they come, is not true. Prices are made by the meeting of the minds of the buyer and seller. If the buyer does not wish to buy at a price he does not buy. By the same token, if the seller does not wish to sell at a price he should not sell, but generally he does.

Low prices at the refinery come from two primary causes, (1) too much of the product on the market, so that a seller has to beat his brother refiner to making a low price in order to get the business and (2) spineless selling, meaning the refusal of the refiner to hold to his price.

If the prices were not carried by the trade papers they still would be known to the buyers because refiners and brokers would simply spend a bit more money to wire and write the buyers of their offers. Without a dependable place in which is shown the actual figures at which goods are sold, neither the refiner nor the buyer would know each day just what prices were on the market. The refiner, if anything, would be in worse plight than he is now, because he would be subjected to rumored and gossiped prices which might or might not be true. The seller would not know their truth nor, if true, the extent or nature of them. With spineless selling his policy, if that be his policy, he would be stampeded into all sorts of ridiculous and low prices.

It is certainly the buyer's prerogative to get the lowest price he can. The only time the buyer should be censured is when he uses unfair tactics, when he reports low prices that do not exist or low prices for which there is a good explanation, or low prices for goods that do not come up to the specifications.

THERE is no monopoly of virtue on either side of the argument. We know that buyers will try to run down the market by one artifice and another but we also know from experience that refiners will try to run it up by fair means or foul. The price reporting mediums of the oil industry and of every other industry, have to be constantly on guard against the manipulations of both sides to the eternal buying problem.

Incidental to this argument, but a mighty important point in it, is the fact that both refiners and jobbers are so crazy to buy on contract that they leave little or nothing to be sold on the open market on which their contract prices are based. When you criticize this to either refiner or jobber, you get the reply "Well, my business is different and I simply must have all my stuff contracted."

What has damaged the refining industry these many years is overproducing the market, contracting unintelligently and spineless selling. All the trade papers can do is preach against these evils, which all have done. But the only people who can change them are the refiners.

Texas Legislature

(*Continued from page* 8)

it goes much farther and, in fact, makes it mandatory on the commission to consider market demand, in this language:

"The commission shall have power and it shall be its duty from time to time to inquire into the production, storage or transportation of crude petroleum oil and of natural gas and the market demand therefor, all in order to determine whether or not waste exists or is imminent. The commission shall have the right to require any party to make and file with the commission sworn statements as to facts within the knowledge of possession of such party pertaining to the production, storage or transportation oil or of natural gas, and to the market demands therefor, as often and for such periods as the commission may specify, and may require any well or wells under the control of any party, whenever and as often and for such periods as the commission may specify, to be inspected and gauged and the books and records of any party to be examined."

The Amendment to Sec. 7 of the present law provides that the commission may take note of waste, actual or imminent, in any oil or gas field, and may do this either upon its own initiative or upon complaint. After hearing on the subject, if it is found that waste is present, actual or potential, "the commission shall make such rule, regulation or order as in its judgment is reasonably required to correct, prevent or lessen such waste."

Then this sweeping provision, which would confer upon the commission almost unlimited authority to balance production to demand as between pools, whereas the present law compels the commission to consider each pool separately, on the basis of waste alone:

"In the event any rule, regulation or order which the commission may adopt shall require the limitation or fixing of the production of crude petroleum oil or natural gas in any common pool or portion thereof, the commission shall justly and equitably distribute, prorate or otherwise apportion or allocate the allowable production as in its judgment the facts may justly and equitably require. In order to prevent waste or unreasonable discrimination in favor of one pool as against another, the commission is authorized to allocate or apportion the allowable production among the various pools in the state."

Sidney Powers

This provision early in the present special session encountered opposition from certain gas producing-purchasing companies in the Panhandle.

Attempt to apply the common purchaser law of Texas to gas purchases met with opposition in court from large companies who produce the greater part of their requirements for transportation to markets outside the state. The federal court enjoined enforcement by the state of the common purchaser act, insofar as it applied to gas in that area.

Among several amendments to the present bill and substitute measures which have been introduced, is one including a proposal which James E. Ferguson, husband of the next governor of Texas, has been advocating, namely a graduated production tax, which would make it prohibitive to produce large wells at more than a small part of their capacity. One amendment provided for regulation of retail prices of petroleum products throughout the state.

There is also considerable discussion as to the legality of the present emergency session, based upon the interpretation of the provision as to the term of office of a legislator. Those raising this argument contend that terms of house members expire two years after date of election, which would mean Nov. 4.

Sidney Powers is Dead After Operation

TULSA, Nov. 7.—Dr. Sidney Powers, consulting geologist of the Amerada Petroleum Corp. and one of the best known members of his profession, died at a hospital in St. Louis Nov. 5, following an operation. He was 42 years of age.

Dr. Powers received his master's degree from Massachusetts Institute of Technology in 1913 and his doctor's degree from Harvard in 1915. His first oil industry work was with The Texas Co. in the Mid-Continent. Later he served with the U. S. Geological Survey and was geological officer with the A. E. F. during the war.

Later Dr. Powers was one of the organizers of the Amerada and served as its chief geologist from 1919 until 1926, when he became its consulting geologist. He was president of the American Association of Petroleum Geologists in 1930-31 and a member of various other scientific and engineering societies. He has contributed a large number of papers to geological literature.

Dr. Powers is survived by his widow and two daughters.

Deep-Rock to Install Stabilizer Unit

TULSA, Nov. 5.—Burrell-Mase Engineering Co., Pittsburgh and Tulsa, is engineering a combined vapor recovery-pressure distillate stabilizer plant for The Deep Rock Oil Corp. at Cushing, Okla.

The larger portion of the equipment is being furnished by the designers, and erection is under the supervision of the Deep Rock organization. Ground was broken for the unit this week, and the plant is expected to be in operation by about Jan. 1.

Many Station Rents Cut in Detroit Despite Complex Land Deals

By Roger B. Stafford
N. P. N. Staff Writer

DETROIT, Nov. 5

DETROIT gasoline and oil marketers who have stations on leased land or who lease land and stations for operation by themselves or their agents, are busy trying to deflate their rentals. Many rental reductions are being obtained.

The longer the unexpired term of the leases and the larger the company, the more difficult it is to get landlords to consider a reduction in rentals. If the unexpired portion of leases is short the landlords are inclined more to listen to the statement of facts the oil companies' land men have to make as to why today's volume of business and operating margins do not warrant rentals that were common previous to 1931.

The lease situation in Detroit is perhaps more involved than in any other city in the country. This is the opinion of a land agent for a major oil company who was astounded at the ramifications he encountered in delving into the leases his company made when the automobile industry was booming in this city.

The land contract and its acceptance as collateral by banks and discount companies are the cause of much of the trouble in getting rent adjustments in Detroit today.

An oil company real estate man gave the following example of a Rube Goldberg transaction hinging upon the desire for and subsequent lease of land for service station purposes and the use of a land contract:

A owns a tract of land suitable for a service station for Oil Company B. B's policy is like that of a good many other companies that do not wish to tie up large sums of money in real estate. It prefers to lease the land with improvements in a service station for a term of years, usually ten. In this case Landlord A does not wish to build a station but he knows another man C who will build the station and who will contract to buy A's land.

A sells his land to C under a land contract agreement, and C agrees to allow the rent he will receive from Oil Company B to apply on the purchase price. Then A decides he should get funds for some business or other use, takes the land contract C has given him to a Bank or Discount Company D, borrows money, posts the land contract as collateral, and assigns the rent payments from Oil Company B. The Discount Company may then issue mortgage bonds against the contract, with a provision that the rent from Oil Company B shall be placed in a fund for retirement of the bonds.

THE bondholders make the fifth party to this involved financing arrangement which hinges about the lease contract of the oil company for a service station.

The lease contract may have been based on 1928 or 1929 gasoline business in the neighborhood in which the service station is to be built. The gallonage in those years and the outlook for future years may have presented a rosy hued picture. Last year a blue cast began to grow over many of these operations. The gallonage of the stations was diluted, and the Detroit market has been badly depressed because of new competition and the efforts to meet that competition.

Today to make any showing at all the rents must be lowered. The oil companies that were so optimistic three and four years ago, realize that as much as anybody else. And they are going about the task of trying to get lower rents. But their real estate men say it is no child's play to get reductions, especially in complex deals like the example given here.

To get adjustments, it is not just a simple task of company B going to Landlord C from whom the station was leased originally. It is necessary to see every other party in this whole involved deal and get his or their consent to a reduction. A reduction means a less valuable security for the bondholder, a weakening of its securities for the discount company, and possible foreclosure for the land contract giver or the original owner of the land involved. Usually some one and frequently all the parties involved will balk at a reduction in rent.

"Why did your legal department let you get into such an involved mess?" one man was asked.

"Our lawyers did object," he said, "but we wanted to be in the Detroit market and we had to have station sites. Deals like the one outlined were the custom here. The real estate market was bullish and we had to take what we could get or stay out. Land contracts are used almost the same as money in Michigan. Florida is about as bad."

ANOTHER company which came into the Detroit market when the boom was subsiding, obtained much more favorable contracts of the same general nature as the company that was caught with high rentals entwined with involved transactions.

This company obtained suitable service station sites with-

out the outlay of large sums monthly and this company's gasoline gallonage today has not shrunk like that of companies which entered the field in the boom days of large ideas and well filled war chests.

In seeking adjustments different companies are seeking new leases on different bases. Some are asking reductions in the flat rental leases which were based principally on an estimate of boom time gallonage. Some are trying to have leases changed to a variable rent basis; that is, the rent to fluctuate with the volume of trade transacted on the site. In the latter instances the companies are trying to work down to a basis of 0.5-cent a gallon rent on the land and an equal amount on the improvements, making a total rental of 1 cent a gallon for the complete service station with equipment. The rentals are exclusive of lease and agency outlets which in Detroit are based mostly at 0.5-cent a gallon plus the usual agency commissions.

In most of the leases of service station sites, even during the boom days, it was provided that the land owner should pay the taxes. Oil companies protected their interests with a clause in the lease contracts providing that should the land owner fail to pay the taxes, the oil companies might pay the taxes and deduct from the rent the amount of taxes paid.

One of the objections landlords have been raising to reductions in rentals, is the fact that taxes have increased a great deal since the depression began. For the coming year, it is said that state and county taxes in Detroit will be almost double the taxes before the depression. A decline in city taxes is expected, but this decline will not offset the increase in the other taxes.

A proposal to limit land taxes to $15 per $1000 of valuation is on the Nov. 8 ballot. If this proposal carries there is a possibility that the increase on land taxes will be halted but there is no guarantee that total taxes on land improvements will be any less. The chances are that total taxes will be slightly more than in the past until governmental expenses are reduced and normal business conditions are restored.

High taxes are the bane of those companies whose policy it has been to buy the land on which their stations are built. Some stations have proved unprofitable because of the high taxes. One company official told this writer that two of his company's stations had been closed recently because it was cheaper to let the property lie idle than to operate stations on them at a loss.

Some companies whose initial tenures of leased sites have expired, have not exercised an option again to lease the properties. Two cases of how rentals tumble in such instances were cited by one oil company manager. One station had carried a monthly flat rental of $210 and another of $225. When renewal of the leases was declined by one company, the stations were offered another at $75 a month each. The offer was turned down but the owners finally agreed to accept 0.5-cent a gallon rental rather than let the stations lie idle while taxes continued at a high rate.

Evidence of the struggle to escape taxes may be seen in every direction in Detroit. Whole blocks of old buildings have been razed because the rents from the old structures were insufficient to cover the taxes on them. Land owners have found it better business to tear down the buildings and get a small rent return from the land as a parking lot. Much of this land has been offered oil companies for service station purposes but in view of the large number of stations already in Detroit and the small average gallonage per station, few new stations are being put in.

Most of the new stations have been to care for traffic through street extensions or widenings; in other words, to care for traffic that has been diverted from some other thoroughfare. In such cases numerous stations along the once heavily traveled streets have been made practically worthless. And in such cases it has been possible to get landlords to see the light of reason and to get a downward adjustment in rentals.

In many cases where rents were far above the amount warranted by the business done at the stations, it has been possible to get reductions. Sometimes it has been necessary to threaten the landlords with refusal to renew leases on their expiration, but where the leases have considerable time to run many landlords are obstinate, believing that today's conditions are temporary and that boom times will soon come "round the corner" and today's level of rents will be justified.

It has been necessary in a few cases to use attrition to get a fair deal from landlords. The land owner frequently is required by the terms of a lease to maintain the building and ground at a specified standard. The lessee may insist on the execution of this requirement to the letter, and this insistence may make it more advantageous for the lessor to knock off $25 to $75 a month from the rent and get a liberal interpretation of the maintenance requirements.

The better method, however, and the one which retains the good will of the landlord, is to lay the cards face up on the table and show how it is impossible to keep a station going at today's volume of business and narrower operating margins and still pay boom time rentals. Considerable progress is being made in Detroit along this line except where a real estate deal is as complex or nearly as complex as the example cited in this article.

S. C. Hope is New Head Of Gilbert & Barker

SPRINGFIELD, Mass.—Stanley C. Hope, vice-president and general manager since January, 1929, of Gilbert & Barker Mfg. Co., was elected president and general manager by the board of directors Nov. 1, succeeding Charles C. Ramsdell, president for the past three years. Mr. Ramsdell retired after 40 years' association with the company.

P. H. Bills, treasurer, was elected vice-president and treasurer, and J. G. O'Conor, export manager, becomes executive assistant to the president.

The company, a manufacturer of oil marketing and storage equipment since 1870, has home offices and plant in Springfield and plants in Toronto, and at Sydney, Australia.

Railroads Adopt Plans to Increase Competition With Other Carriers

WASHINGTON, Nov. 8

MOVES of probably great significance are being made by the railroads in the matter of competition between themselves and rival forms of transportation. Directly involved are the tows and barges, oil companies are operating on the rivers.

More moves, in a legislative sense, may be agreed upon at a meeting of the Association of Railway Executives in New York on Nov. 10. While the executives have not said so, it is understood that at that meeting they will endeavor to agree upon a program of legislation.

The thought now is that instead of trying to put burdens on the rival forms of transportation they will endeavor to get relief from their own burdens.

Several big railroads attribute their acute financial condition to inability to make rates that will be truly competitive with carriers by water, which means the water transportation facilities of big oil companies as well as vessels not owned by industries, their inability arising from restraints put upon them by the regulating body. The Illinois Central and other southern railroads are among those who believe the principles followed by the regulatory body has resulted and is resulting in damage to them.

Within the week, Examiners Hoy and Peyser, employed by the regulating body have recommended that the southern railroads be permitted to make reductions in their rates on petroleum which the carriers hope will enable them either to retain what petroleum traffic they still have or to regain some of it. Those examiners have recommended that the rate body permit the Illinois Central and the Yazoo & Mississippi Valley to cut their rates on refinery gasoline, kerosine and naphtha from the New Orleans-Baton Rouge refinery group to Memphis, Tenn., in half, lowering it from 30 to 15 cents a hundred pounds.

According to Hoy and Peyser, only one sixth of the petroleum products originating in the New Orleans-Baton Rouge group or district now moves by rail to consuming points. Beginning in 1922 when the Standard of Louisiana and the Pan-American Petroleum Corp., began using their own barges to carry their products to Memphis, the petroleum tonnage of the Illinois Central system, has fallen off steadily. Its revenues have also fallen, from the high peak of $185,000,000 gross in 1929 to an estimated gross of $85,000,000 this year. It is not earning its fixed charges.

Receipts at the oil company terminals in Memphis are estimated to range from 120,000 to 180,000 tons annually, or from 4000 to 6000 cars. The examiners estimated the daily refining capacity of the New Orleans-Baton Rouge district at 142,000 barrels, of which the railroads haul only one seventh. The rest goes by water to points on the Ohio and Mississippi Rivers, Gulf of Mexico and Atlantic seaboard.

THE Illinois Central asked for permission to put in an 18-cent rate to Paducah,Owensboro and Louisville, Ky. This plea was refused by the examiners. They said no because they said that such low rates to the Ohio river crossings would wreck the freight rate structure from the Mid-Continent and related refining districts and bring ruin to the freight rate fabric of the lines north of the Ohio and east of the Mississippi. They said that relatively small damage to the rate structure would result from permission to cut the rate to Memphis one half. The railroads figured the oil company barge costs to Memphis at about 10.8 cents a hundred pounds. The examiners said they could not see how the railroads would regain traffic from the oil company barge lines even on an 11 cent rate. They also came to the conclusion that the railroads would not be able to earn anything on a rate less than 15 cents a hundred.

It is that figuring for them by the regulating body that is giving the railroads the horrors. They point out that reduced rates will give them some money even if the examiners cannot figure out a profit. The examiners proceed upon the assumption that there is no such thing as "save loss" business.

These same examiners, however, have recommended that the railroads be permitted to make heavy slices in the rates from the New Orleans-Baton Rouge group and from Mobile, Ala., to Birmingham, Tuscaloosa, Holt, Montgomery and Selma, Ala., on gasoline alone. The points named are at the head of navigation on the Warrior, Black and Alabama Rivers where the Pure Oil Co. has a barge line.

THE examiners recommended that the railroads be permitted to make rates of 20 cents from Mobile and 23.5 cents from New Orleans to the Alabama points mentioned.

Adoption of these recommendations will be a dynamiting, to that extent, of the high petroleum products rate structure the regulating body put into effect last March as a result of the Hoch-Smith resolution of 1925 intended to bring about an increase in rates on all other freight and reductions in rates on agricultural products. The oil industry, at the time the Hoch-Smith proceeding was going on, told the railroads and the regulating body that increased rates would drive oil away from the railroads to truck and barges but both went ahead in a bull-headed way notwithstanding.

Oil Exposition Planned

DALLAS, Nov. 7.—Final arrangements have been completed for holding the Oil Equipment and Engineering Exposition at the Texas state fair grounds, Dallas, April 17 to 23, 1933, under the management of E. G. Lenzner.

Discounts Widened to Commercial Buyers on Atlantic Coast

CLEVELAND, Nov. 7

DISCOUNTS to many classes of commercial consumers on their gasoline purchases have been widened in Atlantic Coast states the last week.

In Pennsylvania and Delaware, the commercial discounts at service stations were increased from 1 to 2 cents a gallon Nov. 1. The new 2-cent discount, so far as the major companies are concerned, applies only to contract customers.

Meeting competition of jobbers and dealers was given as the reason for doubling the size of discount allowed commercial buyers. The 1-cent discount had been used by most companies since around the first of June. Previously the discount had been 2 cents generally, with some large buyers such as utilities and the meat packers getting as much off as 4 cents a gallon. These discount rates have never been posted, as posting of commercial contract prices is not required under the code of marketing practices. These discounts were off the posted service station prices.

Commercial buyers of 20,000 gallons or more gasoline a year will be given 0.5 to 1.5 cents larger discount on tank wagon deliveries in Atlantic Refining Co., Standard Oil Co. of New Jersey and Standard Oil Co. of New York territory as a result of a new schedule put into effect in Atlantic Refining Co. territory Nov. 1 and in Standard of New Jersey and Standard of New York territory Nov. 3.

The new schedule of discounts on tank wagon deliveries to commercial consumers which applies in Atlantic Coast states from Maine to South Carolina, inclusive, is:

1000 to 20,000 gals. yearly, 2 cents off retail tank wagon.

20,001 to 100,000 gals. yearly, 2.5 cents off retail tank wagon.

100,001 to 300,000 gals. yearly, 3 cents off retail tank wagon.

More than 300,000 gals. yearly, 3.5 cents off retail tank wagon.

Commercial consumers have generally been getting a discount of 2 cents off retail tank wagon price for tank wagon deliveries, the same as dealers. There may have been exceptions in which larger discounts were granted but such exceptions were contract prices and therefore not posted or published.

The large commercial consumer as long as this schedule is maintained will be able to buy gasoline for less than the price paid by dealers. Uncontrolled dealers are now allowed 2 cents off the retail tank wagon price, or 3 cents off the normal service station price. In depressed areas the service station and tank wagon prices are usually the same, so the dealer has an operating margin of only 2 cents a gallon in such areas.

Controlled or 100 per cent dealers are allowed 1 cent a gallon rent and 2.5 cents a gallon commission, a total of 3.5 cents off the posted service station prices.

In New York, Baltimore and Washington, dealers are allowed a discount of 3 cents a gallon off tank wagon because of high operating costs in those cities.

U. S. Duty Disturbs 10 Per Cent Of World Gasoline Movement

NEW YORK, Nov. 4

ENACTMENT of the U. S. import duty re-routed about 10 per cent of the world's gasoline exports, and it is further expected that the greater part of the gasoline exports from Dutch West Indies and Trinidad which formerly went to the U. S. must now seek an outlet elsewhere, possibly in the European zone.

The trend of legislation is encouraging the establishment of refineries within important gasoline importing countries.

The use of gasoline substitutes is gradually assuming importance in nations having little or no crude production.

Such are the major factors influencing world gasoline trade pointed out in a study of "The World Gasoline Trade in 1931" by V. R. Garfias and R. V. Whetzel, foreign department, Henry L. Doherty & Co., New York.

World production of gasoline in 1931 is estimated at 561,000,000 barrels. This is about 5,500,000 barrels in excess of consumption. About 72 per cent of this production was consumed in producing countries, and 28 per cent was exported.

The U. S. import duty which became effective June 21, 1932 is credited in the study with being the most important recent development affecting world gasoline trade. About 12,000,000 barrels per year are involved.

"In the face of slightly declining consumption, the European market cannot absorb such quantities at the present time without displacing nearly an equal volume of gasoline that formerly was exported from the U. S. to Europe," the study continues.

"This re-routing of exports has been facilitated through the acquisition by one of the largest American oil companies of extensive refining facilities in Dutch West Indies to take care of its European markets directly from the South American zone."

Other factors influencing world trade are local conditions affecting consumption. In the U. S., Canada, New Zealand and Australia, having a small population per automobile, the trend of gasoline consumption depends to a great extent upon the development of paved roads and an increase in population, the study continues. In western and Northern European countries having a well developed road system increasing consumption depends largely on an increase in the number of persons who

can buy and maintain gasoline consuming vehicles.

A summary of production and consumption by world zones in 1931 follows:

North American zone: produced 81 per cent and the countries consumed 76 per cent of the world's gasoline total in 1931. Production in 1931 is estimated at 458,551,000 barrels, consumption of 422,465,000 barrels.

South American zone: produced about 27,000,000 barrels of gasoline, and consumed about 13,000,000 barrels. Exports were about 17,000,000 barrels, with 70 per cent shipped to the United States and the remainder to Europe.

European zone: gasoline production about 46,000,000 barrels, and an estimated consumption of about 96,000,000 barrels. Exports were more than 2,000,000 barrels, imports about 52,000,000 barrels, with 63 per cent from the North American zone, 9 per cent from the South American zone and the remainder from Persia and the Dutch East Indies.

Oriental zone: total output more than 29,000,000 barrels, while consumption within the zone was about 23,000,000 barrels. Exports were over 13,000,000 barrels, almost all going to Europe. Imports were about 9,000,000 barrels, with 78 per cent coming from the U. S. and the remainder from Roumania and Russia.

Lower License Fee Turns Tax Receipts Upward

LANSING, Mich., Nov. 4.—Gasoline consumption in Michigan responded Aug. 1 to the lowering of the automobile license fee for the remainder of 1932. Gasoline tax receipts for September were larger than in September, 1931. This was the first time since last winter that gasoline tax receipts were larger for any month than in the corresponding month of a year before.

The gain in September was $33,000 over September, 1931, Frank D. Fitzgerald, secretary of state, has reported. Tax receipts in August were $300,000 less than in August, 1931.

Indiana Marketers Consider Co-operative Buying

INDIANAPOLIS, Nov. 4

INDIANA jobbers are considering co-operative buying of their petroleum products, and at the annual convention of the Indiana Petroleum Association here Nov. 2 to 4 details of the plan were discussed in closed meetings.

Development of plans has reached the point of conferring with refiners as to possible sources of supply. Max L. Wickersham, executive secretary of the association, is conducting negotiations, with the approval of the board of directors, and propositions from sources of supply will be submitted to members of the association.

The associaton plans to work into co-operative buying gradually, starting first with third grade gasoline, then adding other grades and other petroleum products as demand warrants. It is possible also that members not tied up with a national brand will be using the brand name of a marketing organization now in operation.

Specifications are being considered now with refiners interested in being a source of supply. Uniform specifications will be worked up for products as they are added to the co-operative buying list.

The convention started Wednesday with an address by Mr. Wickersham, followed by an address by W. F. Small, Arrow Oil Co., Peru, and president of the association.

Ken Cloud, Irving Cloud Publishing Co., Chicago, addressed the convention on marketing through the service station.

Frank Moore, sales promotion manager, Continental Oil Co., opened the Thursday afternoon meeting with an address on merchandising. Mr. Moore suggested that marketers know their customers, study their characteristics, study how the station's goods can be merchandised to these customers. He suggested also that marketers study the products they sell, the management of their companies, and the cleanliness of their stations and the sales force at the pumps.

Warren C. Platt, publisher of NATIONAL PETROLEUM NEWS, spoke on current marketing problems of the industry.

L. O. Chasey, secretary to Governor Harry G. Leslie, gave a political speech, reported more fully elsewhere in this issue.

Robert A. Warfel, executive secretary of the Ohio Petroleum Marketers Association, addressed the convention on "If I Were A Marketer."

A warning to the industry that its gasoline market may be undermined through railroad legislation to curb the use of the automobile was sounded by Sam Hadden, secretary of the Indiana Trucking Association.

Many persons were opposed to trucks using the highways, and the railroads furnished the leadership, he continued. Starting in 1930 the railroads began a truck curbing legislative drive that has accomplished more than was thought possible through 15 years efforts.

He cited the Texas law which permits a seven-ton load, if that load is being trucked to a railroad, but only a 3½-ton load if that load is competing with railroads. He cited also the U. S. Supreme court, in its unanimous decision upholding the Texas law, stating that legislatures can regulate traffic so that all transportation systems will have goods to carry.

The railroads are not going to be content to haul empty passenger trains around the country, he continued. Railroads will seek legislation restricting use of the passenger car, and we will be headed back to the hard railroad depot benches of 30 years ago and have to face the czar back of the ticket window.

The annual banquet was on Thursday evening. Frank C. Hall, Hall-Rattermann Oil Co., Cincinnati, was the principal speaker, assisted by George H. Siemer, Merchants Oil Co., Cincinnati.

Three Guest Speakers Announced For Institute Meeting

NEW YORK, Nov. 7

THE three guest speakers at the annual convention of the American Petroleum Institute at Houston Nov. 15-17, and their subjects are:

Sir John Cadman, chairman of the board, Anglo-Persian Oil Co., Ltd., London, "Oil and Policy." This is Sir John Cadman's second address before the institute.

Henry I. Harriman, Boston, president of the U. S. Chamber of Commerce, "Unshackling Business."

Peter Molyneaux, Dallas, editor of The Texas Weekly, "The Social Stake in the Oil Industry."

The highlight of the business sessions will come at 2 p. m. Nov. 15 when reports are made by both economic committees on the forecast of motor fuel consumption for the period from Oct. 1 through March 1, 1933, at the opening general session following the address of Amos L. Beaty, president of the institute.

Although the formal program begins Nov. 15, the convention actually starts Nov. 12 with committee meetings. These committee meetings continue into the first of the week.

A preliminary draft of the report of the Institute's Committee on Refinery Statistics and Economics, on probable motor fuel consumption over the winter months, has been completed. Albert J. McIntosh, Standard Oil Co. of New York, is chairman. Committee members will meet in Houston Nov. 12 for a final revision of the report. On Nov. 14 it comes before the general committee on refining, headed by D. J. Moran, president of the Continental Oil Co., and vice-president of the institute's refining division.

The second report forecasting gasoline consumption will be made by the Volunteer Committee on Petroleum Economics of the Federal Oil Conservation Board. Dr. John W. Frey, Bureau of Foreign and Domestic Commerce, is chairman of the committee. This report is practically completed and will be submitted to the federal oil board before Dr. Frey leaves for Houston.

Three principal general sessions are on the program. These are the Tuesday afternoon meeting for the president's address and reports of the economic committees; a session Wednesday afternoon with the three guest speakers on the program; and a general session Wednesday evening on production affairs of the industry.

The annual membership banquet will be held on Thursday evening. Entertainment will be provided through the courtesy of the Houston Wildcats, headed by John R. Suman, Humble Oil & Refining Co.

R. C. Heil Dies After Auto Accident

CLEVELAND, Nov. 7.—Richard C. Heil, 56, president of the Commercial Oil Co. here and prominent Ohio marketer, died at a Cleveland hospital Nov. 6 following an automobile accident Nov. 3. Mrs. Heil also was seriously injured in the accident and is confined to a hospital.

Funeral services will be held in Lakewood, O., Tuesday afternoon. Mr. Heil is survived by his widow and two stepsons, both actively interested in his oil marketing companies.

Mr. Heil went to work as an office boy for the Standard Oil Co. of Ohio in the early 1890's. Later he was placed on the technical staff of the company, and when he left in 1911 he was secretary to the president. Mr. Heil went to the Lubric Oil Co., Cleveland, and in 1921 to the Commercial Oil Co. A few years later he joined the Fred G. Clark Co. in charge of the Hyvis department. In 1930 he rejoined the Commercial Oil Co., which markets Fleetwing gasoline and Hyvis Oils in Cuyahoga and Summit counties, Ohio. Mr. Heil also was president of the Hyvis Oil Co., Ashland, Ohio.

Charles Leopold, a stepson, is manager of the Hyvis company at Ashland, and Erwin H. Leopold, another stepson, is secretary of the Commercial Oil Co.

Mr. Heil was active in association work, and was a past president of the Ohio Petroleum Marketers Association and of the Western Reserve Petroleum Club, Cleveland. He was well known throughout the Ohio and western Pennsylvania oil region.

The fatal accident happened late Thursday evening as Mr. and Mrs. Heil was driving in the southwestern part of Cleveland. Mr. Heil apparently suffered a bilious attack. He was able to shut off the ignition, but he lost control and the auto crashed into a concrete trolley pole.

A.S.M.E. to Hear Paper On Lubricating Oils

NEW YORK, Nov. 5—The Chemical Mechanism of Lubrication will be discussed in a paper by William F. Parish and Leon Cammen at the annual meeting of the American Society of Mechanical Engineers Dec. 8. In their paper the authors will point out that it is mechanical engineers who design lubrication systems but that lubrication as such is essentially a chemical phenomenon. A vivid light has been thrown on the mechanism of lubrication by recent progress in physical chemistry generally, and its most novel branch, surface chemistry.

The paper explains in terms of electric fields why excessive heat is developed when a dry shaft runs in a dry bearing. It establishes new criteria for the testing of lubricants and lays a foundation for future research in lubricating oils manufacture and their application. The new Sperry-Cammen tester will be demonstrated.

A preliminary paper by the same authors was given at a meeting of the society last June and by invitation before the Institution of Petroleum Technologists at London, Nov. 7.

The PANORAMA of PETROLEUM In The MID-CONTINENT

By Lawrence E. Smith
N. P. N. Staff Writer

THE boys are saying that if you want to find anybody in the wildcatting business, just look in the lobbies of hotels in Houston and San Antonio. The south Texas country is getting most of what "play" is going on today. Lots of country to gamble on; cheap drilling—except on such structures as Conroe; accessibility to water transportation, year-'round operating conditions—these blessings conspire to draw the attention of the explorers.

This may well prove to be the last stand of the wildcatter, as he has existed since the beginning of the industry. That there is a place for him there is no question; indeed, when a considerable part of the present proved reserves shall have been worked off and the need for discovery is acute, he may be restored to all his former glory. But, as things are fashioned now, the wildcatter finds it difficult to sell those 40- and 80-acre pieces of "protection" to companies who want to be represented in case the wildcat well finds oil. The game is different. Companies are not buying much, but when they buy they more and more insist that the acreage be offered as undivided interests in a block to be operated as a unit.

Something of glamour, of the life and color of the industry will be lost if it proves that the old-time wildcatter has passed permanently. Many of them have fashioned for themselves a place in history and their counterparts are not in existence today. This is necessarily so, with less of the gamble and more of the technical exactness applied to the finding of new pools today.

But, many, now in the industry, sigh for the excitement which attended the doings of a T. N. Barnsdall, of a Col. A. E. Humphreys—who always brought in a wildcat by leading the crew in singing "Shine on Me"—of a Tom Slick, who would completely destroy a box of cigars, one by one, while waiting for the bit to tell the final story of a venture that had cost him thousands of dollars. And many, many more, throughout the years, who drilled where impulse, superstition or application of a smattering of geology led them.

Then, the trade spoke of "Slick's test," or somebody else's. It was highly individual. Now, a new test will be carried on the reports as the venture of Gypsy, Sinclair Prairie, Empire, Texas, Barnsdall, et al and McJinsky. The latter will be the man who worked up the block and sold the interests to the others, keeping out for himself a modest sixteenth of other small fraction.

There is nothing stirring about it. But it keeps down costs and maybe that more than compensates for the pulse-stirring methods of yesterday.

Commission Agent Asks for Co-operation

Whatever the special session of the Texas legislature does, how much authority it gives to the Railroad Commission to write curtailment orders, the commission will still have about the same problem of enforcement that it has had all along. The remarks of J. H. Lawrence, one of the commission's agents, will lose none of their logic or force by reason of new legislation.

In aid of enforcement, Mr. Lawrence suggests the formation of an association, or club, of East Texas operators, lease and royalty owners, to employ an attorney, full time. Suits would be filed for damages against any operator who violated curtailment rules and thereby recovered more than his legal measure of oil. Such suits would be in the name of adjoining property owners.

"Such procedure," said Mr. Lawrence, "when and if adopted and executed, may eventually mean the solution of the control of the East Texas field."

Happenings, Here and There

National guard forces in Oklahoma City, enforcing proration, have been reduced to 42 men and officers. On a recent date there were 108 at work, maintaining regular patrols of the wells.

* * *

In East Texas, 80 guardsmen and 12 Rangers are at the disposal of the Railroad Commission in enforcing the 40-barrel per well per day rule. The federal court decree which, unless superseded pending Supreme Court review of the case, and which knocks out the commission order, is to be entered and made effective by Nov. 7.

* * *

Independent Petroleum Association of Texas will hold its annual meeting Dec. 9 in Fort Worth. One of its principal speakers will be Attorney General James V. Allred, of Texas, who will discuss anti-trust laws.

* * *

Pipeline, six miles long, is soon to be laid from northwestern Torrance county, New Mexico, to McIntosh, to carry gas of high carbon dioxide content to "dry ice" plant that will be built. J. B. Witt and M. H. Woods are principals in the Estancia Valley Carbon Dioxide Development Co. and the Witt Ice and Gas Co. McIntosh is in the central part of the state, about 30 miles from Albuquerque.

* * *

Possibility that general offices of Continental Supply Co., now in St. Louis, would be moved to some city in the oil country, was rumored last week as executives of that company and its parent, the Youngstown Sheet & Tube Co., toured Texas and the Mid-Continent. The report went without official confirmation. In the party were H. G. Dalton, chairman of the Youngstown company; Frank Purnell, president of the Youngstown and chairman of Continental and W. J. Morris, president of Continental.

Late Production News

A NEW pool in the Greater Seminole district has been opened three miles southwest of the St. Louis pool. The well came in for 1940 barrels of 40 gravity oil in 19¾ hours.

In northeastern Colorado, some eight miles from the Greasewood Flats pool, a well of unknown worth is being completed which undoubtedly will lead to more exploration in that area.

A 20,000-barrel well on the northwest plunge of Kettleman Hills has been completed at 8500 feet.

Texas

THE largest well so far completed in the Conroe field, Montgomery county, 40 miles north of Houston, is a northeastern extension on the Moorehead land, L. A. Lang survey, drilled by Hamilton, Hill & Hill. It is about a half mile east of nearest production in the northeastern part of the field and made 217 barrels the first hour through one-inch choker at 5100 feet. Pressure of 900 pounds was registered five-eighths inch choker on tubing.

To the northwest, the Conroe field was further defined when Humble Oil & Refining Co.'s No. 18 South Texas Development Co., A. McCown survey, failed to get oil sand before drilling into salt water at total depth 5186 feet.

California

COMPLETION of Union Oil Co.'s Amerada No. 2, on the northwest plunge of the Kettleman Hills North Dome, featured California production news the past week. Bottomed at 8500 feet the project developed an estimated yield of nearly 20,000 barrels of 37 gravity oil a day.

With more than 1000 feet of perforated casing landed on bottom, Amerada No. 2 is approximately 150 feet deeper than the No. 1 well on this lease. Although drilled on fee land not included in the cooperative plan of development, the Amerada well will be beaned back to conform with proration allowables.

Approximately a mile and a half northwest of this completion, the North Kettleman Oil and Gas Co.'s Lillis & Welsh No. 1, a wildcat, is drilling below 9500 feet still in search of the Whepley shale marker. Doubt is expressed that this well will develop commercial production.

In the Los Angeles Basin area, Barnsdall Oil Co.'s Trust No. 2, in the Rosecrans pool, was being swabbed for production from a depth of 6913 feet when the swab was lost. Field scouts believe this project is likely to open up a deeper producing horizon in the field.

Although the initial yield was below that anticipated, Continental Oil Co.'s Bixby No. 35 in the Seal Beach field had boosted its output to nearly 1000 barrels a day.

Oklahoma

PROGRESS of wildcats continues to occupy attention of the Oklahoma producing industry. Several are getting to depths which will call for careful watching from now to completion. One of these is the Amerada Petroleum Corp.'s test in the NE SE NE of 9-13-6E, near Stroud. Located on a structure worked out by geophysical survey, it is drilling at 2930 feet.

Test of the Sovereign Oil Co., in the SW SE SE of 14-12-3E, Lincoln county, went through the Mayes lime section, 5025-5135 feet, and is continuing to the objective Simpson series.

Two more wells are under way in the recently opened Wentz pool, west of Perry, Noble county. One of these is about three miles southeast of the discovery, which is in the SE NW of 17-30-2W. It is the Stanolind Oil & Gas Co.'s in the NE NW of 33-20-2W and is outside the unit block on which the discovery was drilled. It had reached depth of only a thousand feet as the week closed.

The other test in this area is in the community block, which the Shell Petroleum Corp. is operating. Work has not started on this one. Its location is in the SW SW of 8-20-2W, a half mile northwest of the discovery.

The notable completion of the week in Oklahoma was the No. 1 Cook of Hilton Phillips and others, SW SW SE of 21-7-4E. It is about a three-mile jump from the edge of the St. Louis pool southwest to the Cook well, which opens a new pool. Pay formation, in Simpson dolomite, was found at 4155-58 and the well flowed 1940 barrels in 19¾ hours. No water is showing. The oil is 40° A. P. I. gravity.

Daily Average Production, Important Districts, American Petroleum Institute Figures

(By Telegraph)

	Week Ended Nov. 5 Barrels	Oct. 29 Barrels
Okla. City	87,000	75,600
Total Okla.	394,100	395,400
East Eexas	349,100	341,800
Total Texas	851,000	835,550
California	465,300	475,100
East of Rockies	1,637,400	1,621,500
Total U. S.	2,102,700	2,090,600
Crude Imports	83,142	66,857
Total New Supply	2,185,842	2,163,457

Kansas

FAILURE of one important wildcat and the start of another, in areas considerably removed from production, were Kansas features. The failure was that of Phillips Petroleum Co. in the NE NW SE of 17-16S-7W, southeast of Kanopolis, Ellsworth county. It had hole full of water in the Siliceous lime, 3062-65 feet.

Sinclair Prairie Oil Co. is building rig for a test in the center of the SW SW of 16-19-21W, Ness county. This is in the western area of the state where structural conditions are little known and the test will be an important one.

Colorado

SOME eight miles northeast of production in the Greasewood Flats pool Weld county, Ramsey Petroleum Corp., of

Oklahoma City, has opened a new pool during the current week. Located in the SW NE SE of 15-7N-59W, the test topped the Muddy sand at 6696 feet and continued in that formation to 6710 feet. Seven-inch pipe was cemented on top of the sand. The hole was bailed to 3600 feet and after standing for two hours, the fluid level (mud) raised 1000 feet. Bailing was resumed and the well blew in for 10 million feet of wet gas with a showing of oil.

Worth of the discovery is not yet known, but its showing will lead to further exploration in this northeast Colorado area.

Texas Proration Continued Pending New Legislation

HOUSTON, Nov. 4.—Pending the emergency legislation in the Texas general assembly, the Railroad Commission of Texas merely met and recessed at its Nov. 3 proration hearing on East Texas.

East Texas, meantime, continues prorated on a 40-barrels per well basis for its 8750 wells. The recently ordered top allowable of 335,000 barrels daily for the field is thus made elastic to the extent that, until new orders are issued, all producing wells may make 40 barrels per day.

Pending the signing of the decree of the three-judge federal court in the case of the Peoples Petroleum Producers, Inc., and others, consolidated in the omnibus proceedings against the commission and state officials, in which the court held railroad commission orders invalid, proration orders continue in effect generally throughout Texas.

The attorney general's office moved to ask the federal court to stay execution of its decree until the U. S. Supreme Court ruled on arguments in the earlier Alfred MacMillan case, which has been reset for argument at Washington, Dec. 5.

The commission last week heard complaints on its reduction orders of Oct. 15 applying to the Crane-Upton and Winkler county areas of West Texas. It had previously rescinded its Yates field, Pecos county, order, which had been enjoined by Mid-Kansas Oil & Gas Co., and had restored allowable production there to 65,000 barrels daily.

Chairman L. E. Barrows, of the Crane-Upton operators' committee, recommended that the allowable daily production of this district be raised to a minimum of 13,000 barrels instead of the 7700 barrels recently ordered. It was also testified producing wells in the area cannot handle the water brought out with the oil at any lower allowable than 13,000 barrels daily.

At a hearing on the Winkler district, West Texas, operators sought to discontinue the present unit and potential method of prorating, the field production hereafter to be allocated on September actual yields. As the field makes 95 per cent water and it was testified it cannot produce above 28,000 barrels daily, the commissioner's order reducing the area to 25,000 barrels daily was described as impractical. New orders made effective Nov. 1 for various Texas fields were formalities.

Morgan Heads California Geologist Section

LOS ANGELES, Nov. 4.—At the ninth annual meeting of the American Association of Petroleum Geologists, Pacific Section, held in Los Angeles, Nov. 4, Frank A. Morgan, chief geologist of Rio Grande Oil Co., was elected president to succeed Carrol M. Wagner, General Petroleum Corp. Eugene C. Templeton, petroleum engineer of the Union Oil Co. was elected secretary and treasurer to suceed H. L. Driver, Standard Oil Co. of California.

The Pacific Section of Economic Paleontologists and Mineralogists met for a business meeting and dinner on Nov. 3. Special entertainment and a dinner dance was scheduled for all members and friends to conclude the convention, Nov. 4.

Analysis and Effects of Current Movements on an active Thrust Fault in the Buena Vista Oil Field, California, was presented by T. W. Koch. Another feature of the two-day session was a discussion on "Some Problems in the Correlation of Miocene Formation in California" as led by W. D. Kliempell, R. D. Reed, and M. G. Edwards.

Visiting members were also interested in a paper on the Knoxville-Shasta Succession in the Coast Ranges of California by F. M. Anderson. R. D. Reed presented the paper in the absence of Dr. Anderson.

Little Chance for Passing Oil Industry Bills

WASHINGTON, Nov. 4.—With the federal treasury showing a deficit of $554,357,278 in the first quarter of the fiscal year it is apparent that Congress will have to undertake again the task of balancing the budget when it convenes in December.

In view of this situation, those interested in legislation can see little or no prospect that Congress will act.

Perhaps the legislation in which industry generally is most interested are the proposals for giving the trade practice conference codes approved by the Federal Trade Commission a definite standing before the courts. Legislation of that sort is pending before the Senate judiciary committee, of which Senator Norris is chairman.

Whether warranted or not, the thought with respect to codes is that they authorize industries that adopt them to do things which, technically may not square with the anti-trust laws but which nevertheless are deemed helpful to industry in the opportunity they afford for the industry to police itself and prevent destruction by unhealthy competition. Senator Norris is not regarded as a great help to industry in his views on this matter.

The House judiciary committee has before it the McKeown and other measures looking to the authorizing by Congress of an interstate petroleum compact. That committee has made a favorable report on the bill, which gives the consent of Congress to compacts among the oil states and provides the machinery for putting them into operation. However, it is held there is little chance for action on the bill, in the political uproar that is expected to follow the election.

Improved Earnings Reported by Most Companies in 9 Months, 1932

CLEVELAND, Nov. 7

MOST oil companies that have reported in the last week their earnings for nine months of 1932 show improvement over the earnings the first nine months of 1931. Some companies had larger profits the third quarter of this year than last but results were less satisfactory the third quarter this year with other companies.

Amerada Corp. reported lower earnings for both the third quarter and the first 9 months of this year.

Continental Oil Co. reported great improvement. This company's net profit the first nine months after all reserves and charges was $101,949, compared with a net loss of almost $9,500,000 the first nine months of 1931.

Improvement was reported by Seaboard Oil Co. of Delaware, the former Mexican Seaboard Oil Co.

Shell Union Oil Corp. greatly reduced its losses this year. Simms Petroleum Co. also minimized its losses. Skelly Oil Co. cut its losses in the nine-month period but reported net loss for the third quarter as against a net profit for the third quarter last year.

Standard Oil of California, the only large member of the Standard Oil group to make quarterly reports, showed a smaller net profit for the third quarter this year but a larger net for the nine months.

Texas Pacific Coal & Oil Co. reported a small loss for the third quarter this year as against a net profit of almost $400,000 the third quarter of 1931, but in the first nine months this company had a net profit of $385,939, compared with a net loss of more than $1,000,000 the first nine months of last year.

Tide Water Associated Oil Co. reported gains in net profits this year over last. Associated Oil Co., its western subsidiary, showed improvement in both periods this year. Tide Water Oil Co., its eastern subsidiary, reported improvement for the nine months, but its third quarter net was under last year's third quarter net.

Darby Petroleum Corp. reported a net profit of $184,915 for the nine months ended last Sept. 30.

Hancock Oil Co. of California has a net profit of $49,088 for the third quarter of this year.

Oil Company Earnings

Nine Months

	1932	1931
Amerada Corp.	*$968,061	$957,972
Continental Oil Co.	101,949	*9,484,163
Seaboard Oil Co.	612,198	72,480
Shell Union Oil Corp.	*3,098,020	*23,641,126
Simms Petroleum Co.	*331,812	*2,357,508
Skelly Oil Co.	*272,500	*1,941,624
Standard Oil Co., California	12,013,385	11,941,787
Texas Pacific Coal & Oil Co.	385,939	*1,087,097
Tide Water Associated Oil Co.	3,495,370	175,710
Associated Oil Co.	2,666,190	1,859,054
Tide Water Oil Co.	1,484,995	*1,478,952

Third Quarter

Amerada Corp.	*$489,835	$405,427
Continental Oil Co.	358,451	*2,955,322
Seaboard Oil Co.	237,388	54,242
Shell Union Oil Corp.	*162,593	*2,681,620
Simms Petroleum Co.	*44,654	*657,855
Skelly Oil Co.	*228,979	761,259
Standard Oil Co., California	5,096,842	6,297,819
Texas Pacific Coal & Oil Co.	*30,324	396,860
Tide Water Associated Oil Co.	1,395,670	1,253,175
Associated Oil Co.	1,307,712	747,746
Tide Water Oil Co.	325,192	529,619

*Net loss.

Gasoline Shipments Off 8.4% in September

WASHINGTON, Nov. 7.—Domestic shipments of motor fuel in September were 8.4 per cent below those in September, 1931, according to reports gathered by the U. S. Bureau of Mines. This is better than the August figures which showed a drop of 10.8 per cent under the previous August.

For the first nine months of the year motor fuel shipments to domestic consumers have been 8.2 per cent below those in the same period last year. Imports have dropped 28.8 per cent in the same period and exports 19.8 per cent.

Motor fuel stocks were reduced 4,925,000 barrels in August to 47,933,000 barrels.

Apparently anticipating an upturn in demand for lubricating oils refiners increased their output in September 61,000 barrels over August. Instead of an enlarged demand refiners shipped 19,000 barrels less. Stocks at refineries rose 217,000 barrels.

In the first nine months of the year lube production has been reduced 13.7 per cent while domestic demand has been off 15.5 per cent and exports 12.6 per cent. Stocks Sept. 30 were 14.4 per cent lower than those on Sept. 30, 1931.

September U. S. Petroleum Tax Collections Up

WASHINGTON, Nov. 4.—The federal government collected $11,409,747.92 in gasoline taxes in September to cover August sales. This compares with $8,944,857 in August to cover July sales.

Indicated domestic shipments of gasoline in August totaled 1,478,694,000 gallons according to figures of the U. S. Bureau of Mines. If there had been no gasoline sold tax free and no evasions the tax collections on gasoline would have been $14,786,940. The indicated gallonage on which tax was not collected thus was 237,720,000 gallons.

In July indicated domestic shipments from refineries was 1,315,314,000 gallons with 420,828,300 gallons apparently escaping the tax. A large part of this probably was accounted for by the fact that refining companies with their own distributing outlets need not pay the tax until the gasoline is sold at retail to the consumer.

Lubricating oil taxes collected in September rose to $1,399,303.91 from $822,775.50 in August. On the basis of August domestic refinery shipments of lubricating oils the oil tax should have been $1,597,680 if there had been no tax exempt sales or evasion. Apparently 49,594 barrels of lubricating oil was sold tax free.

An Open Letter

To The Editor,
Time, Inc.,
New York City

Dear Sir:

In your issue of Oct. 24 whilst discussing the Sun Oil Co., you make this remark:

'When oil was booming. . . . you never heard much about the Sun Oil Co. If it was mentioned at the Tulsa Club, where engineers in khaki pants and tall boots fingered field maps with bankers in tailor-made clothes . . ." etc.

I know you are always well informed and so I accept this account as being entirely accurate. My point in discussing it with you is to get some information.

Taking this description of the Tulsa Club as the correct one, I came in from Gray Horse the other day. The object of the trip to Tulsa was to "finger" a map with one of those bankers you spoke of. I have a forty, right close to production, and need a little money to pay up the rentals, otherwise the lease will go back to the Indian that owns the farm.

Now, my wife told me before I left that I had better put on my other clothes which, although not exactly tailor-made, conform to the best style and pattern of a few years back. But I told her that Time had spoken of the boots which engineers wear even at the Tulsa Club and that I should be able to get into offices in my working clothes. So I set out in my big-hole boots and choke-bore pants.

Well, I tried to see the banker I had in mind at his office, but they said he was at the Tulsa Club. It seems that a great many of Tulsa's captains of industry and finance go in there to relax and recuperate a bit from the strenuous work they are doing. So I went to the club.

Now, Mr. Editor, I wish you would take it up with that club and find out for me what days they wear boots and finger maps with tailor-made suits. It was speedily demonstrated to me that I had picked the wrong day. There were any number of what seemed to be tailor-made suits in the room and at least two passed me at the door (I didn't get any farther) carrying what we in Gray Horse know as walking canes. But mine was the only set of boots. So I faced them in the other direction and went away. This seemed to take quite a load off the mind of the colored man who presided at the door.

Now, if you will get me the facts on this business of wearing boots in the Tulsa Club, I shall be much obliged. Better yet, if you care to take a little flier in oil and pay the rental on my forty, I will cut you in for a piece of it and there will be no occasion to bother about what to wear while fingering maps with bankers in suits made by hand.

Yours,
Ellick Botts, Consulting Pumper.

* * *

When Ross S. Sterling retires in January as governor of Texas he will have established one mark that probably will stand for many years. Under him, the legislature has been in session five times in two years, including the special session now in progress.

The regular biennial session of the legislature, which began in January, 1931 lasted 131 days. A great many things occupied that body, including oil. In July that year, the governor called the lawmakers into extraordinary session to enact a conservation law. In September, they met again to see what could be done about cotton acreage restriction, among other things and this year another special session was held on tax relief. The current session is, of course, devoted to oil.

* * *

Tornado insurance costs, an important item in many oil fields, have been materially reduced on derricks of American Petroleum Institute specifications, according to schedule recently announced by the Oklahoma Inspection Bureau, which represents most of the fire and tornado underwriters. Rate on all-steel derricks, designed, erected and "certified to be in accordance with A. P. I. specifications for standard rigs and derricks," carry a rate of $1. In contrast, wooden derricks cost $8 for protection.

* * *

We have an inquiry as to what an "interstate compact" is. One way of looking at it is that it is one of those compacts which the witnesses for the prosecution carry when they are helping to violate the Mann Act.

* * *

William B. Way, who managed the International Petroleum Exposition for three years, is manager of radio station KVOO, Tulsa, whose chief owner is William G. Skelly. Mr. Way finds that exhibitors of equipment are far easier to deal with than are tenors, coloraturas and players of the bull fiddle.

* * *

J. Dorian Curtin, formerly in the southern division of the Mid-Continent Petroleum Corp., Tulsa, has been transferred to the general sales office as special representative of Robert W. McDowell, vice-president.

New Rotary Type Plate Improves Vacuum Fractionating Column

By D. B. Keyes*

THE general problem of fractionation is not complex. On the other hand, the basic ideas involved are not appreciated by all chemists and engineers.

The fractionating column is a series of stills built one above the other, the vapor from one passing to the one above and the liquid overflow from the one above to the one below. The basic requirements of a fractionating column are, first of all, that the heat to generate the vapor should be put in at the bottom of the column and nowhere else. The condensate formed to produce the liquid overflow should be formed entirely from the vapors from the top of the column. It is necessary to have intimate contact between vapor and liquid on every plate in order to obtain equilibrium conditions. It should be noted also that in order to meet the first two requirements there should be no heat transfer through the walls of the column.

The problems of fractionation as experienced in the petroleum industry usually have a definite relation to one or more of these basic requirements of operation. For example, it has been common practice in years gone by in petroleum refineries to furnish the heat for the fractionating columns from the vapors of the feed. This means that in most cases the feed in the form of a hot vapor has been put into the column at the bottom section. Any liquid overflow from the plates above striking this vapor is bound to remove an appreciable proportion of the more volatile constituents which should be permitted to pass through the column and out at the top.

A practical example of this is the well-known utilization of a fractionating column in connection with a reaction chamber in a cracking unit. In certain cases not only does the reflux down the column come in contact with the feed vapors and remove a portion of the gasoline but there is present a feed liquid going to the pipe still or pipe heater. This liquid comes in contact with the feed vapors from the cracking chamber and removes an appreciable proportion of the gasoline in the feed vapors. This gasoline constituent is carried back to the pipe still where it is cracked to a certain extent to non-condensable gases, and therefore the operation as indicated above means a real loss in efficiency.

Some fractionating columns used in cracking units permit the feed to enter in the form of vapor above the bottom of the column in order to get around this difficulty. There is inserted a high pressure steam distributor at the bottom of the column. The object of the high pressure, high temperature steam is to remove or strip the gasoline constituents from the liquid passing out of the bottom of the column to be used as recycle stock.

ANOTHER suggestion which has been made by the author and by others has been the use of what is now known as a "reboiler." This is a pipe coil in the bottom of the column, through which the hot feed vapors pass before entering the column somewhere above this position. In this way it is possible to have indirect heating at the bottom of the column, producing vapors of the more volatile constituents, which in turn will have a tendency to strip the liquid on the plates below the feed plate and produce a liquid residue at the bottom of the column which is practically free of these more volatile constituents.

There are certain difficulties involved in the use of this method. For example, there is a tendency for the hydrocarbon material to polymerize and form a solid coating over this coil and cut down the heat transfer. Furthermore, it is somewhat difficult to obtain much heating surface without increasing appreciably the back-pressure on the feed line, something which is not desirable.

IT IS common practice in petroleum refineries to use one large column for fractionation and to take off from the sides various cuts as well as the overhead and bottom cuts. It is deemed advisable to do this instead of utilizing several columns and taking off products only from the top and bottom of each column as is common practice when dealing with simple mixtures of pure compounds.

In recent years fractionation of natural gasoline, which involves separation of more or less pure compounds, has been carried out in a series of columns rather than one column utilizing side streams. The question is, should we continue to use side streams in fractionating complex mixtures, or should we make use of several columns in the regular manner. This question has never been satisfactorily answered.

It is extremely difficult to demonstrate why multiple columns are necessary for the fractionation of complex mixtures. On the other hand, the increase in efficiency using multiple columns over a single column when operating on a

*Professor of Industrial Chemistry, University of Illinois.

four component mixture is readily demonstrated.

Let us assume that we have four hydrocarbons, a, b, c, and d. Their volatilities decrease in the same order. They are present in a mixture to the extent of 25 molar per cent each. The latent heats are approximately the same. This four component mixture is led into the side of a continuous fractionating column with an indirect heating unit at the bottom and a reflux condenser at the top. We will furthermore assume that there is no heat transfer through the walls of column.

If this column is operated and brought to equilibrium without any withdrawals from the sides, we will have an overhead product containing large amounts of a and b and small amounts of c and d, and a residue from the bottom containing large amounts of c and d and small amounts of a and b, A certain plate that we will call n, located above the feed plate has a molar composition of approximately 40 per cent a, 30 per cent b, 20 per cent c, and 10 per cent d.

We will assume that this particular cut is desired and can be disposed of for some useful purpose. A side stream composed of about half of the liquid overflow which falls onto the plate n is removed at this point. Vapor passing through the plate n—1 immediately below the plate n has not been changed as yet by this operation. There are the same number of moles of vapor per unit of time and per unit of section area as there were before. We have already assumed equal latent heats for all components. Therefore the number of moles of c and d, for example, that are condensed in this liquid are the same as before. Due to the fact that we have half the flow of liquid or half the amount of liquid per unit of time, the liquid leaving the n—1 plate will be richer in c and d than it was before. This will eventually affect the vapor composition produced at the bottom and throughout the column. The product from the bottom of the column will be richer in c and d than it was formerly but there will be less of it. This decrease in c and d will appear as a contamination of the overhead product or the condensate from the column.

The general effect has been that we have increased the stripping section at the expense of the enriching section. The column can be brought back to its former equilibrium in several ways. One way would be to increase the overhead reflux. This increase in the reflux means a decrease in the capacity of the column.

A NEW type of plate for use especially in vacuum columns is discussed briefly by Dr. Keyes in the accompanying article. A horizontal plate rotates within the customary column shell and on this plate reflux or liquid falls, to be thrown out against the shell, collected and returned to the next lower plate or disc, also rotating. This process is continued down the entire length of the column.

The author also outlines the major principles of fractionation and how these principles have been applied to refining and other industrial problems. The thin-film concept of contact between vapor and liquid is explained, and the efficacy of froth on the plate as an aid to fractionation is shown.

On the other hand, if we should run the condensate from the original co'umn into a small second column, very little heat would be required to fractionate the mixture and produce not only the mixture desired but also a fairly pure product consisting largely of a with some b. This column would be smaller than the main column and the reflux would be considerably less than the excess reflux required by the same side stream operation.

There are, of course, many other factors to be taken into consideration. For example, the product b may accumulate on the nth plate due to peculiarities in its partial pressure. Furthermore, it may not be an economic advantage to produce any pure products whatsoever. Lastly, the question of capacity may not be of interest because of excess equipment present at the plant.

Oftentimes the four constituents a, b, c, and d represent four cuts, two of which may accumulate on two different plates within the column. The removal of side streams from these two plates may have to be fractionated in separate columns to obtain satisfactory products.

If such is the case, it can be easily seen, following the original argument, that three relatively short columns, one for the main separation of a and b from c and d, and two columns smaller in diameter for the separation of a from b and c from d, would represent a system which is bound to produce closer cuts and at the same time operate with a less expenditure for the capacity of the entire unit.

This statement is based on the assumption that most of the heat is lost in the reflux condensers. The total amount of heat withdrawn in these three reflux condensers cannot be any greater than the heat withdrawn in a single reflux condenser providing one column is used and withdrawal is made from two plates as well as from the top and bottom. The capacity of the unit is assumed to be the same but the products are bound to be purer from the standpoint of their distillation curves.

It can be said, therefore, without fear of serious contradiction that the general principle of utilizing multiple columns on complex mixtures in order to get effective fractionation is preferable to the utilization of a single column with side streams.

The question of how to obtain a perfect contact between liquids and vapors has been argued for at least 280 years. In all that time there have been a great many devices invented to give this ideal contact between the vapor and a boiling liquid. Strange to say, the petroleum refiners, in years gone by, failed to realize that this was an important question and failed to take advantage of these many years of development. It is comparatively recently that we have seen the bubble cap plate installed in our refineries, though it has been known for many years that this particular type of plate gave very efficient operation.

We can excuse the refiners to a certain extent by saying that the cost of gasoline production in the old days was not an im-

portant matter from the standpoint of gross profits. What was important was the capacity of the plant. In their endeavor to obtain the largest possible capacity in the minimum time they could not afford for economic reasons to investigate fractionating column design or to install elaborate equipment.

Considerable material has been published on the design of these plates, and we have in operation at the present time columns which are merely filled with coke or other packing material and columns with the most elaborate bubble cap construction, and columns with construction ranging all the way from the first to the second.

THE solvent industry has for a long time used a simple method for testing a particular plate construction. This scheme, I am told, is now being used by petroleum refiners. A galvanized iron plate is made with the approximate dimensions of the one proposed and placed over a gas-tight tank. A hose line permits water to flow in one side of the plate, corresponding to the down pipe of the plate above, and at the calculated rate. A steam or air line is inserted in the tank below to represent the vapor and is regulated at the calculated rate to be used in actual practice. The height of the down pipe, the flange on the down pipe, and the height and construction of the caps are all adjusted to the point where the bubbling, and especially the froth, developed is most desirable, a condition determined by experience. The path of the liquid across the plate is easily ascertained by putting in a dye, such as ink, in the water entering from the hose line.

It has been found by long experience there is more effective contact between the vapor and liquid in the froth than there is in the bubbles of vapor passing through the liquid. It is therefore desirable to obtain as much froth as possible without producing a spray which is carried with the vapors to the plate above.

It has never been shown by accurate measurements that this last statement is a fact. However, the indications are that it is extremely important to obtain this froth. Such questions as the distribution of the froth and the extent of bubbling can be easily ascertained by observation of this trial or experimental plate. The particular size and shape of groove in the bonnet has never been shown to be important. The height of the down-pipe, in other words, the liquid level or liquid seal on the plate, has been found to be important. Whether long rectangular bonnets or numerous small round bonnets are used is not a serious question. It is, of course, desirable to have a long path for the liquid from one down pipe to the other. Sometimes baffles are used in order to lengthen this path. The construction of the flange of the down pipe in order to have the latter function properly—in other words, full of liquid—is a matter that can be easily adjusted in a short period of time by trying out down pipe flanges of various angles for the particular liquid flow.

It should be remembered that in certain cases resins or gums are formed on the plates and have a tendency to fill up the liquid space. It is desirable in such cases to have a plate construction that will permit cleaning the plate without tearing down the column.

IT is desirable to have as much space as possible without making the column too tall in order to prevent a spray from being carried from one plate to another. There have been developments in baffles in recent years which show a marked tendency to cut down this spray. These baffles should also increase the contact between vapor and liquid if properly constructed. They are usually placed above the free spaces between the bonnets.

It is a known fact that the difficulty of contact between a gas and a liquid lies in the thickness of the so-called liquid and gas films which exist at the boundary or interface. The gas film is important as a resistance medium when the gases are quite soluble in the liquid. The liquid film is important when the gases are only slightly soluble in the liquid.

The gas film is usually important for most fractionations because of the similarity between the gases and the liquid and the corresponding great solubility. This means this gas film should be as thin as possible.

Taking this fact into consideration, the ideal condition for contact in a section of a fractionating column should be small liquid droplets passing through the gas phase. This occurs in columns utilizing a spray of liquid in each section. The froth produced above the liquid on a plate is also efficient from a contact standpoint because these liquid bubbles are constantly produced and broken thus causing a rapid movement of the gas in respect to the liquid surface, thereby reducing the thickness of the gas film.

THE result of this fundamental argument indicates the importance of the froth above the bubble cap plate previously mentioned, and the importance from a constant standpoint of the revolving disc type of column which will be described later.

Very little trouble is experienced in preventing heat transfer through the walls of the column in the large sizes used in industry. The reason for this is the small ratio between the surface exposed and the volume of constituents, or the small ratio between the surface exposed and the amount of heat within the column. On the other hand, laboratory columns where the ratio is very large exhibit considerable difficulty. It has been shown that one of the most important features of laboratory column construction is to provide suitable means to prevent heat transfer through the walls of the column. The use of vacuum jackets, some of them silvered, is common practice. The results of some workers indicate that this feature is more important than developing the contact within the column between the vapors and the liquid.

The question of determining the theoretical and practical number of plates for a definite fractionation has occupied the attention of many of our chemical engineers in recent years. Several excellent methods have been devised to calculate the

"Dubbs cracked gasoline of 71 octane number developed the same power in the DeSoto engine as a straight-run gasoline originally of 61 octane number, raised to 71 octane by adding Ethyl fluid." W V HANLEY, *Oregon State College* —NATIONAL PETROLEUM NEWS, *Sept. 21, page 27*

Power is what the motorist wants and Dubbs cracked gasoline gives it to him

Dubbs cracked gasoline sets its own new high standards of performance

There is never enough Dubbs cracked gasoline There won't be enough in 1933

Dubbs cracking pays but that won't help you unless you have Dubbs units to do it

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
Owner and Licensor

theoretical number of plates required for a definite separation of a binary mixture, and recently methods have been devised to calculate theoretical number for the separation of complex mixtures as used in petroleum refining.

The determination of the number of plates to be used in practice has not been helped much by the development of these methods for determining the theoretical number of plates. The matter of plate efficiency, and what is more important, the variation of this efficiency from plate to plate, is not something that can be easily determined. It has not been possible to make an accurate calculation of this efficiency factor.

A CLOSE study of the McCabe-Thiele method of determining the theoretical number of plates for a binary mixture will indicate that we must know the plate efficiency of every plate in the column before we can make any accurate estimate of the practical number of plates to be used. The present method of determining the number of plates to be used in the fractionating column for petroleum work is based entirely upon experience. In other words, the selection of the number of plates for a particular column is determined by investigating a similar operation utilizing a similar mixture.

Some idea of the practical number of plates necessary for a particular separation can be determined for a binary mixture by scrutinizing the X-Y equilibrium curve and utilizing a simple modified graphical method. There is some indication that a similar method can be worked out to determine the practical number of plates by utilizing true boiling point curves as pointed out by Peters in a recent publication.[1]

It can be said, for the benefit of those who are not familiar with the situation, that the diameter of a column is determined by taking into account the amount of vapor which must pass through this column in unit time to meet the specifications and the maximum allowable vapor velocity. No appreciable spray is carried from one plate to another at this maximum velocity.

The position of the feed plate is such that in the normal operation of the column we would expect on this particular plate a liquid or vapor composition closely resembling the composition of the feed. The actual determination of the position of this plate is again a matter of past experience, and is connected with the number of plates required for the column. It is customary to determine the number of plates above and below the feed separately, the sum being the total number of plates required. This, of course, automatically indicates the position of the feed plate.

Some attention has been paid recently to the importance of vacuum fractionation. It will be noticed at the lower temperatures that the vapor pressure curves of substance such as hydrocarbons in a homologous series are further apart than they are at the higher temperatures. This fact indicates the importance of operating at these lower temperatures—in other words, using vacuum—in order to cut down the number of plates in a column or the amount of reflux, thereby increasing the efficiency of the operation.

UNFORTUNATELY there are certain definite difficulties involved. First of all, it is impossible to obtain high vacuum unless we have available a large quantity of cold water, for condensing purposes, because the vacuum is produced primarily by the condenser. The temperature of the water available is a determining factor in the utilization of vacuum distillation or fractionation. It is also necessary to have a column design which will permit the establishment of vacuum throughout the entire column. This is, of course, impossible with the common type of bubble cap plate which creates a back-pressure and is cumulative as we go down the column. This is unfortunate, because this particular plate is otherwise very efficient. We are therefore forced to use filled columns. The packing material may be of particular construction; for example, spirals enclosed in small cylinders.

It should be realized that it is practicaly impossible to design and construct a filled column of appreciable height that will not exhibit a phenomena of channeling and especially the collection of liquid on the walls unless provision is made at several points in the column to collect the liquid from the walls and redistribute it throughout the packing. The design of these redistributors is rather complex and has not as yet been standardized. Filled columns are frequently used when corrosive gases and liquids are present because this type of column lends itself quite readily to stoneware construction. On the other hand, the redistributors usually must be made of metal and therefore present a special problem in design.

There has been a tendency in recent years to develop a special fractionating column for vacuum fractionation, principally for lubricating oil refining. This column consists of a vertical shaft to which has been attached horizontal discs. The liquid falls on the top disc, which is revolving at a rapid rate, and is thrown out in the form of a sheet or a spray to the walls of the column where it is collected and returned to the plate below. The vapors pass up through these areas of spray, and the contact has been excellent in the experimental units so far tried.

The back-pressure in such a column is very small. It is possible, therefore, to obtain fairly high vacuum throughout the entire column and at the same time obtain a relatively high capacity considering the overall diameter of the column. Experiments have indicated that such a column can be made smaller both in diameter and height than the corresponding bubble cap column and do the same amount of separation. It can be said that this is at least a very interesting and worth while development.

The value of steam distillation has been appreciated for many years. It is possible to fractionate at low temperatures without applying vacuum if we add a second liquid which is immiscible with the first. We thereby gain the advantages of

[1]To be published soon in Industrial and Engineering Chemistry.

vacuum distillation while operating under pressure. It is therefore permissible to use the more efficient, from the standpoint of contact, bubble cap column. It should be noted that the presence of two immiscible liquids is the important factor. It is not necessary to have steam and oil. Any two immiscible liquids will presumably function in a similar manner. For example, a mixture of liquid hydrocarbons and methyl alcohol would undoubtedly function in the same manner as steam and a vegetable oil.

The use of non-condensible gases in place of this second liquid has received some consideration. It is true the vacuum effect is present in this case. However, the question of condensation becomes more serious. The presence of non-condensible gases makes condensation extremely difficult. In other words, the temperature of the condenser must be lowered considerably in order to get the major proportions of a valuable product in liquid form.

Refining Industry Continues Active Development During Depression

NIAGARA FALLS, N. Y., Nov. 8

THE oil refining industry has undergone phenomenal development during the depression, Dr. J. Bennett Hill, chief chemist of The Atlantic Refining Co. declared at a meeting of the Western New York Section of the American Chemical Society tonight.

This development, which began ten years ago, Dr. Hill said, "has continued apparently unabated throughout the last three years of depression, and this, coupled with the fact that the production end of the industry has also made drastic steps towards putting its house in order, gives credence to the belief that the petroleum industry may be one of the leaders in business recovery."

Progress, according to Dr. Hill, has been brought about through scientific research, the study of existing processes, and their revision or replacement by other processes by the application of sound chemical engineering principles.

"In place of the almost proverbial backward industry of 15 years ago, we now have an industry, not yet by any means perfect, but still an example of efficiency in manufacturing methods," Dr. Hill pointed out in discussing "Trends in the Petroleum Industry."

Distillation of petroleum, Dr. Hill said, is the most important development in the refining industry during the last decade.

"The economies in proper fractional distillation of petroleum have been sufficiently great to justify intensive research work on fractionating column design," he continued. While ten years ago knowledge of fractional distillation resided almost entirely in the coal tar and alcohol industries, today the petroleum industry is probably leading the field.

"The more recent developments in petroleum refining are taking place as a result of, or in anticipation of, changes in demand for products. In this changing demand the automotive internal combustion engine and particularly the automobile has been the dominant factor. The demand of the motorist for more power, higher speeds, better cold weather performance and greater safety are necessitating fuels and lubricants quite different from those supplied years ago.

"Anti-knock gasoline has brought with it another problem for the refiner, namely, that of gum. Severe cracking conditions tend to produce in the gasoline unsaturated compounds which readily oxidize and polymerize to resinous materials. The time honored refining process by sulfuric acid removes these products, but also removes a certain amount of the valuable constituents of the cracked gasoline. Other refining processes are therefore being developed to remove these bodies.

entirely different line of attack is to add to the gasoline substances which inhibit for a time the oxidation reactions leading to gum. Substances such as hydroquinone, pyrogallol, and catechol, have such an action.

"The demands on the lubricating oil have been none the less severe. Oils which will function properly in hot and cold engines must show a minimum change of viscosity with temperature (viscosity-temperature slope). This characteristic of Pennsylvania oils has been largely responsible for their popularity. On the other hand, however, some such oils tend to give rise to more carbon formation in the engine than more naphthenic oils which show a much greater change of viscosity with temperature. The attempt to produce an oil having both good qualities has resulted in some of the most interesting recent developments of the industry. Three of these should be mentioned.

"1. The hydrogenation of lubricatnig oils of poor viscosity-temperature slope and high carbon formation results in an oil similar to Pennsylvania oils in the first quality and considerably superior in the second.

"2. One refiner is synthesizing a lubricating oil having both desirable characteristics by cracking paraffin wax and repolymerizing the cracked products.

"3. Certain solvents such as sulfur dioxide, nitrobenzene, pyridine and phenol will selectively dissolve the harmful part of a poor oil leaving one possessing both a low viscosity-temperature slope and a low tendency to form carbon.

"The trend toward greater speeds of automobiles and at the same time the lowering of the center of gravity of the car to insure greater safety has put additional loads on the lubricant. High speed transmissions and rears and the hypoid gear in rears in some cases demand oils of greater film strength than the straight petroleum lubricating oil will show. The demand has resulted in the production of extreme pressure lubricants, which are oils treated with sulfur, chlorine or other agents in such a way that the film strength is enormously increased."

Visiting Around the Refineries

By Arch L. Foster

ONE of the interesting facts about the development of modern refining processes is that technical information developed by other industries has been adopted and adapted to the uses and needs of the petroleum refiner. Contributions to refinery technology, in more than one instance, have been made by individuals and groups not previously connected directly with petroleum to the advantage of all concerned.

Recently the writer received a communication, originally addressed to one of the more progressive refining companies, which sets forth in general the remarkable (?) results achieved by the application of well known chemical and physical laws in ways not previously employed, for the solution of vexing problems, the solution of which has brought gray hair and face wrinkles to hundreds of worthy refinery technologists. Like most revolutionary (?) developments in applied science, the methods employed in the processes discussed below, we are compelled to remark, "well, well, and—— and why wasn't that thought of, before?"

So show laboring, and belabored, refiners how simple these methods are, and the gist of how they may be applied to refining to simplify these aforesaid difficulties. The details of the discussion are included below. We shall be glad to receive information from enterprising refiners as to their success in applying these principles; we warn game wardens, golf pros, and pinochle players to be on their respective guards, to handle the influx of refinery chemists and engineers to these sports, as soon as they have provided themselves with huge increments of leisure following the simplification of refining methods by application of these methods to solve their operating troubles.

"Dear Sirs:

"I have devised a process for the refining of Hydro-carbons in Petroleum, Wood and Coal. A purely physical process, cutting the cost of fuel 50 per cent. By eliminating flue losses, by taking care of the critical temperatures as soon as they arrive.

"Fractionation by Distillation, using an invert gas (CO_2) and electricity instead of steam. By working at the vapor pressure of the fraction with a specially devised column and condenser distilling fractions of a wide boiling range.

"Fractionation by Crystallization or freezing and sweating combined. There is no hydro-carbon fractions which can not be readily attained.

"Fractionation by Optical activity. The vapor passing through a plane of polarized light The wave length is controlled Photo-Cell Amplifier. By defraction, the fraction rotates out of the zone into the condenser which takes care of the Dextro., levorotatory action at the proper vapor pressure of the fraction wanted. With this and close fractionation the use of chemicals is eliminated.

"The process introduces 14 patentable devices with which Refiner can produce Gasoline of relatively high octane value, a small percentage of low gravity high grade fuel oil, and all other marketable products possible.

"Would you be interested in such a process?"

* * *

A HANDY, cheap, and efficient method for reclaiming and reconditioning oil drums is in use by the MacMillan refinery at Norphlet, Ark.

Battered drums are placed in an open vat containing a solution of caustic and sodium silicate, where they are spun about and scrubbed with heavy brushes to remove old paint and discolorations. In an adjoining rack the outside and inside of the drums are washed thoroughly with hot water to remove solution and complete the cleaning. In a third rack parallel with the vats hydrostatic pressure is placed on the drums sufficient to force the wall back into cylindrical shape and remove the dents. A husky "buck" with a rubber hammer pounds the heads into shape to remove any bulging caused by the water pressure.

For drying the drums are placed in a lagged dryer compartment, resting on steam coils in the bottom, while air is blown through the inside to hasten drying. After drying and cooling the drums are painted by the use of a spray gun, dried in the drum room and filled as required. Lubricating oils pass through a blotter type filter press immediately before entering the filling mechanism on the way into the drums.

* * *

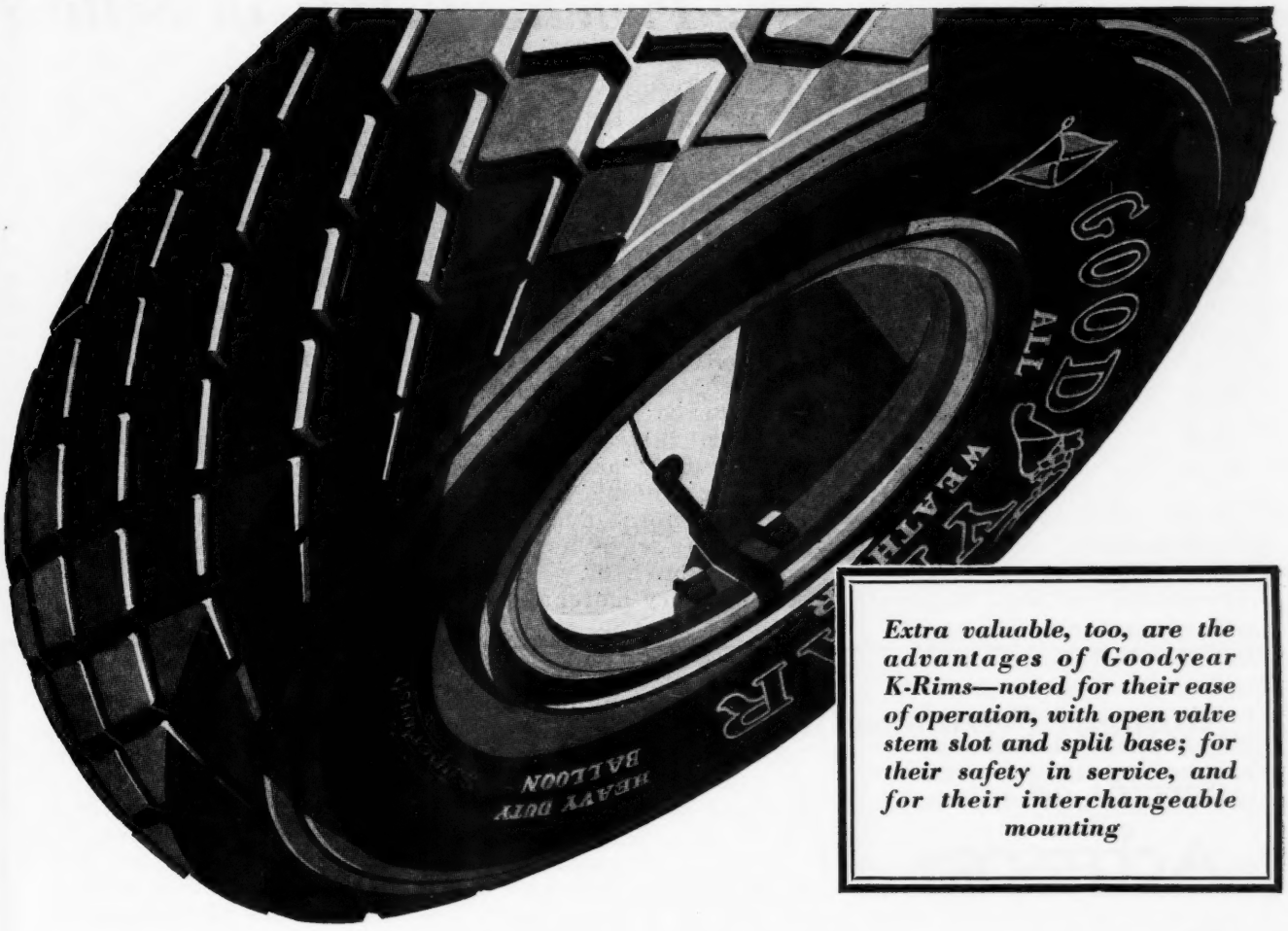
MR. AND Mrs. B. H. Lincoln, Ponca City, are the proud parents of a baby girl, born Labor Day. The father is a member of the research staff of Continental, and maintains on his desk already a photograph of a young fellow who calls B. H. "Dad."

Mr. and Mrs. J. O. Thoen, the former assistant superintendent of Continental's Ponca City refinery, also have a new girl as mistress of the Thoen Mansion.

* * *

C. I. GOSSELIN is the new chief chemist of the Garber Refining Co. plant. The Garber plant recently installed a new cracking unit, and Gosselin is active in the cracking and treating of cracked distillates.

THEY DO THE JOB AT LOWER COST



Extra valuable, too, are the advantages of Goodyear K-Rims—noted for their ease of operation, with open valve stem slot and split base; for their safety in service, and for their interchangeable mounting

THERE—in seven simple words—you have the whole reason for the oil industry's firm reliance on Goodyear Tires.

Where the job is the tough one of getting timbers and tools out over no roads at all, Goodyear All-Weather Tread Balloon Tire traction and buoyancy gets the load there.

Where the refinery truck has to cover mile after mile of on-schedule highway running, the Goodyear All-Weather Tread Balloon with its extra-elastic body of Supertwist Cord stays cool and trouble-free.

Result: whatever the job, Goodyear Tires do it at lower tire cost per operating mile. That's what the industry wants. See your Goodyear Truck Tire Service Station Dealer today for the right type and size for your hauling.

On Your New Trucks Specify Goodyear Balloons Tires

GOODYEAR

MORE TONS ARE HAULED ON GOODYEAR TIRES THAN ON ANY OTHER KIND

Principles to Follow in Making . . .

SERVICE STATION MERCHANDISE DISPLAYS

. . . Practical Aids in Selling

By E. L. Barringer
N. P. N. Staff Writer

DISPLAY of automotive merchandise on the pump island and in station windows will have to receive more attention in the months to come if oil companies are to make the most in profits from their venture into this wider field of selling.

So far, there has been a comparatively small amount of experience available on the principles of dressing service station display space. There are several reasons for this. Major oil companies turned to a diversified line of merchandise only in the past few years. Many local oil companies have stocked accessories over a longer period, but mainly for the convenience of the customer, rather than as a new source for profit. Also, many local oil companies hesitated to push accessories for fear of offending garage and accessory store dealers who were buying gasoline, oil, and greases from them.

As accessory merchandise becomes a more important department of the station, direct experience on display is bound to develop. In the meantime marketers must turn to other lines of retailing for the principles of display and apply them to service station selling.

In general there are two types of displays for merchandise. First, the selling display. Second, the institutional, or prestige building, display. As far as the service station is concerned, this second type of display is not

National Petroleum News Service on . . .

ACCESSORY DISPLAY at SERVICE STATIONS

A New Editorial Feature

NATIONAL PETROLEUM NEWS herewith introduces a new editorial feature—suggestions for displays of automotive merchandise at service stations to aid in their sale.

Those published herewith, and those to come later, are intended primarily as suggestions to assist the marketer and his station crews to work out some consistent plan of display, which is necessary to develop sales of this class of merchandise.

The merchandise in the suggested trims published in this issue does not comprise by any means the complete list of commodities the sale of which can be pushed at this time of the year.

The approach of the winter season offers a large number of items having a seasonal appeal, and the station supervisors and salesmen can make their own selection of commodities. The ideas in the illustrated displays can be applied to other items as well.

The handling of petroleum household specialties, automotive accessories and so on, at service stations, calls for different methods of merchandising than the oil marketing industry has previously encountered.

Sale of these items can only be developed profitably to the station if a consistent, well ordered display program is carried on. Some oil companies have worked out display and merchandising programs and special equipment is offered the trade to aid in the display of merchandise. More important than this, however, is the planning by station executives to coordinate display and merchandising effort and carry it forward regularly and systematically.

In starting this new editorial service NATIONAL PETROLEUM NEWS publishes in this issue an article on the general principles of window display as they apply to oil company service stations.

No. 1—This Display Stimulates Sales of Oil Filters

AFTER EVERY 8000 MILES
CHANGE TO A
NEW PUROLATOR
OIL FILTER CARTRIDGE
Our Service Man can do it—NOW
THIS IS THE OLD PUROLATOR CARTRIDGE
Cut Open
NOTE THE HARMFUL DIRT GRIT SLUDGE REMOVED FROM THE ENGINE
THIS IS THE clean FILTERING ELEMENT SEALED IN THE PUROLATOR CARTRIDGE
BY CHANGING you can save Costly Repairs TO YOUR ENGINE AND MANY DAYS OF WORRY

EXCELLENT example of a cabinet trim featuring one item. The covering of the bottom of the display space can be crepe paper or cloth, in a bright color to attract attention. The interest element is supplied by the arrangement of the cartridges, and the logical placing of the old and the new. Both cards on the left tell what the cartridge is, and have arrows pointed towards the center. Cards on the right, also point to the center, and the sales message tells the results of using an old cartridge and the benefits of installing a new one. The top card carries the action appeal with the final sentence, "Our service man can do it—Now." Cards are held in place by leaning on new cartridges. All materials, excepting the bottom covering can be obtained from the manufacturer. With changes to reduce the height, this suggestion is applicable to windows also.

applicable, except to obtain variety or for filling in during a dull period of selling displays. Institutional displays are used by oil companies at fairs, exhibits, displays in business house windows, or in their own office building street level display space. Two types of selling displays seem to have developed so far. Some oil companies place merchandise in cabinets or windows solely for display. If a sale is possible the station salesmen take the merchandise out of stock. Other oil companies sell direct from the display, quantities of each item being shown.

Every display has four functions. First, it must attract attention, second, arouse interest, third, create a desire to own the merchandise, and fourth, create action towards buying. All these functions apply to the selling of accessories, but modifications seem necessary to meet conditions in the service station.

In the first and second functions, space and time limitations, and the buying mood of the person viewing the display, are different in a service station than in other retail stores.

A person window shopping on a business street can stand on a sidewalk and look at a display as long as he desires. On the station drives there is little opportunity for pure window shopping. Displays are on or in front of the pump island, and every customer viewing the display has entered the station to make a definite purchase. Also, a prospective accessory customer cannot stand around without keeping a watchful eye on other customers coming up the drive. Consequently, a station display needs to hurry through its first and second functions to get into the third.

The creating of a desire to buy and the action leading to the purchase, through a station display, would seem to be linked closely to the salesmen's personal efforts. After all, merchandise is purchased not for the goods itself but for the use to which it can be put. A can of polish, for example, has no value to the customer just as a can of polish, but he will buy it if he sees in that purchase a means of protecting the finish on his car, or a shiny surface which pleases him.

Creating a desire is a somewhat difficult task for the station display. A department store, for example, may take pictures, mirrors, lamps, linen, lace and fine furniture as a setting for the displays of a set of china and crystal. However, it is difficult for the station to picture, in the customer's mind, the ease of starting, better mechanical operation, and economy of operation that comes through new spark plugs, batteries, cables and so on.

Here's where the salesman's efforts logically seem to come

into play. If the display has attracted attention and aroused interest, the desire to own the merchandise can be aided by the word picture, of the utility of the merchandise, painted by the salesman. Desire can be created by signs, pictures, posters, and so on, but the station display has an advantage, in that the salesman can aid in the stimulating of this desire, and the fourth function of the display, creating action to buy, can be put to work.

Each of the four functions of a display can be secured by various methods. Attention is attracted by motion, by sound, and by color and design. So far, color and design have been chiefly used in station displays.

Interest is aroused by lines and designs that carry the prospect's attention to the merchandise featured, and also by a display of seasonal goods. Scattered merchandise, the grouping of unrelated items, and the absence of a general plan for the prospect to follow, often fails to create interest. A splash of vivid color, or motion, may attract attention, but, unless there is a logical arrangement so the prospect can focus his attention, the remaining three functions do not come into play.

The desire to own the merchandise is aroused by bringing to the prospect the picture of the use he can make of the goods. Posters, color combinations, the general grouping of the merchandise, and showing goods in use help create desire.

The ultimate aim of a selling display is to make sales, and this result is sought by cards announcing that the merchandise is on sale for a certain period of time, by asking the prospect to come into the store for a demonstration, or by some similar timely appeal that will turn desire into action.

Service stations have the advantage here. Other stores cannot post salesmen on the sidewalk to ask a window shopper to come in. If the display does create action the prospect must enter the store and seek the proper department. In a service station the display and sales space are virtually together, and the action function of the display can be aided by the salesman. Creation of action is part of the display, no matter where it is located, and it should not be ignored in the station. The part that can be played by the salesman is pointed out as an advantage for station displays, and not as a substitute for the action feature of the display itself.

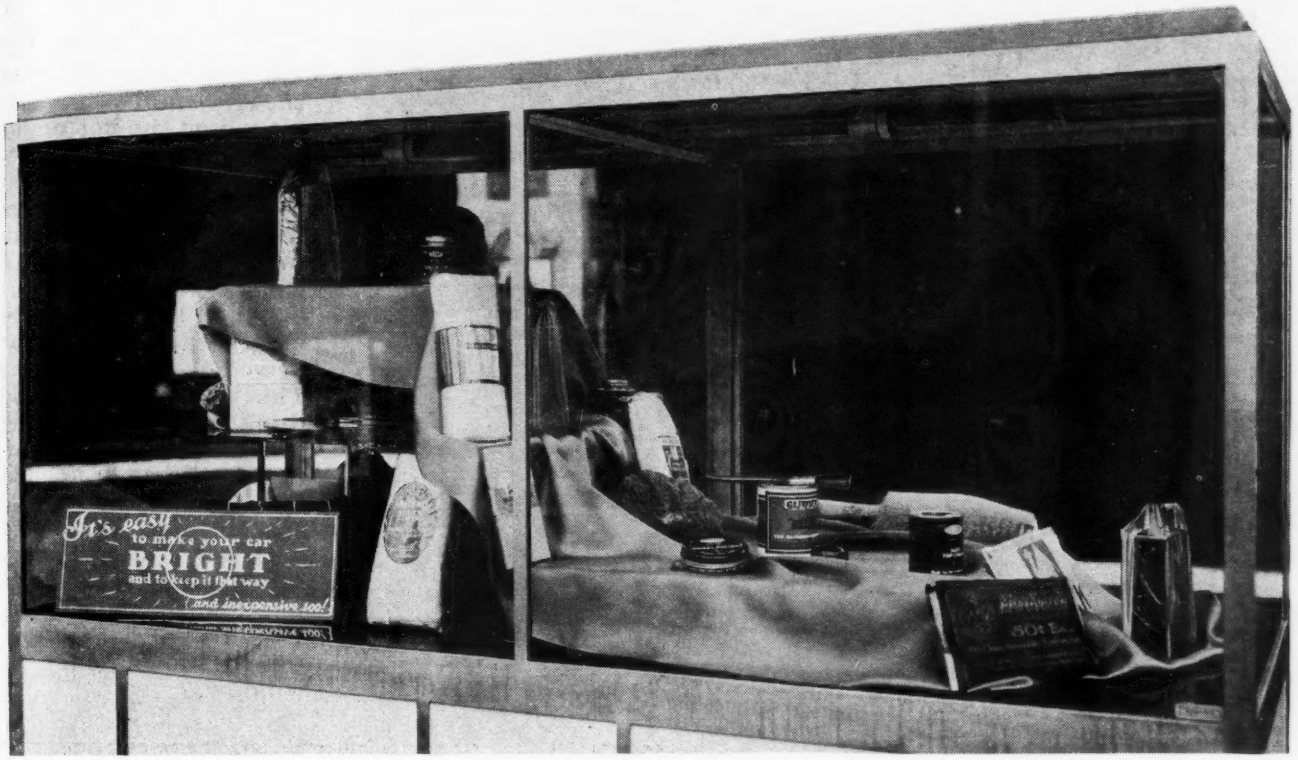
Dressing the windows in the station building has its limitations on account of the absence of full length backgrounds. Station buildings have been designed so salesmen on the inside have a view of the drives to note the approach of customers. A narrow back wall to the display

No. 2 — Now is the Time to Display Windshield Cleaners

FULTON ELECTRIC SLEET-FROST SHIELD
HACKETT IMPROVED UNIVERSAL DUAL WINDSHIELD WIPER
HACKETT IMPROVED UNIVERSAL DUAL WINDSHIELD WIPER
HACKETT IMPROVED UNIVERSAL DUAL WINDSHIELD WIPER

THIS trim suggests windshield merchandise for purchase in anticipation of winter driving needs, The display card for windshield de-frosters was obtained from the manufacturer. The boxes of wiper blades can be taken from stock. Contents of one of the boxes was placed on the bottom of the display space. Arrangement is such that a similar layout can be built for the opposite side. The de-froster display cards could be backed against each other, with the wiper blade boxes coming to the outside corners. If the ends need dressing more wiper blade boxes can be used to match the pyramids on the front and rear. Also suitable for window display.

No. 3—A Seasonal Reminder on Cleaners and Polish



AUTO cleaning and polishing materials are displayed in this trim, and this merchandise is applicable for November selling, suggesting a cleaning to protect the car finish over winter months. A red cloth covers the bottom of the space, and the merchandise is taken out of stock. Nine items are on display. These are polish, cleaning cloth, top dressing, paint brush, nickel polish, polishing cloth, sponge, spoke brush, and touch-up enamel. This is a photograph of an actual station display unit. At the left of the pump in the picture there is a group of pumps, then another cabinet trim, featuring the same items, and having the step-up at one end to harmonize with the cabinet pictured herewith.

space is desirable, however, to prevent customers and salesmen from sitting on the window ledge and knocking over the display. With this limitation of background, a permanent station window display must tend more to horizontal than to vertical lines.

Frequent changes are necessary if the marketer is to get full value from his display space. Authorities claim a display window should be changed at least every 7 to 10 days, and some department stores change twice a week.

How often to change a display in a station would seem to depend on the frequency with which customers drive in. For stations having a large volume of tourist patronage the rate of change need not be as frequent as for neighborhood trade stations.

From the data available at this time it would seem that a 7-day or at most a 10-day, period should be the maximum life of a display in a neighborhood station.

At first glance such a schedule of 36 to 52 window trims a year seems like a large order. However, a careful study of the possibilities of station displays will show many opportunities for variety in backgrounds and in merchandise to feature.

Every season offers suggestions for colors and backgrounds to give attention value to a display. As a starting point there are the national holidays, from New Years through Christmas, and each one suggests appropriate colors and designs. In fact, many tire company one-stop stations last summer capitalized on Memorial day, July 4, and Labor day holidays to display and sell appropriate automotive merchandise for week-end trips.

Then there are various local events that suggest appropriate trims, such as historical occasions, conventions, fairs, high school events and athletic contests. Seasons offer other suggestions, such as winter scenes,

No. 4—Display of Sparkplugs Good Now, or Any Time

S YOUR CAR SLOW
ON THE GETAWAY?
If your Spark Plugs look like this
IT MEANS A SLUGGISH MOTOR
WE TEST SPARK PLUGS FREE
WE SELL ONLY THE BEST CHAMPIONS
You WOULDN'T DRIVE WITH A LEAKY GAS TANK
If your Spark Plugs look like this
YOU WASTE BOTH GAS AND OIL
WE TEST SPARK PLUGS FREE
WE SELL ONLY THE BEST CHAMPION
Sterling
CABLE SETS

SPARK plugs and ignition cables are featured in this display. If a station sold batteries these could be displayed on the bottom of the space, by the battery connectors. Display cards for the plugs were obtained from the manufacturer. The cables were taken out of the box, and the empty carton used for decorative purposes. This display can be duplicated for the other side of the cabinet. If the ends needed trimming, the shelf space could be filled with spark plugs, or another set of cards put up if space permitted. This display is suitable for island cabinet or window.

spring, vacations, harvest festivals, and so on.

Automotive merchandise to be featured may be fitted into a window trim schedule also. Some lines of merchandise have a definite seasonal appeal, while others may be put on display whenever the marketer deems it advisable.

After scheduling merchandise for display during the most appropriate periods, other items in a marketer's stock may be fitted into the remaining periods. Some lines of merchandise seem to lack any definite seasonal sales appeal but they should still be given a definite schedule. Frequency of change, and the conditions under which the work is done at a station, require a comparatively simple display. Since there is little style appeal in automotive merchandise, and basic changes are not frequent, a window trim schedule can be projected over an extended period into the future and merchandise and trimming materials assembled at the station, and the work thus simplified.

Only a few different items of merchandise should be displayed at any one period. This limitation is not set by the number of items sold at a station, or by the size of the cabinet or the permanent windows. It is set by the capacity of the human mind to grasp an impression quickly of what it sees in a window.

Any window display space crowded with a vast number of different items, jumbled together, only leaves the shopper confused. He has seen a great many items but there is a lack of relation among these items and he is confused. There is a difference between jamming a window with a great variety of merchandise, and the selecting of a few related items, then dressing the space with a large number of articles of each item.

Well dressed accessory store, and five-and-ten cent store, windows, which are probably closely akin to station windows, put a large quantity of merchandise in the window. The arrangement and the relation of various items is such that the shopper is able to look at the display and have a sense of orderliness and also be able to concentrate on the items of interest.

A record of sales of merchandise on display is an aid to marketers in checking the effectiveness of their window space and planning future displays. This report should be as simple as possible, to save time in making it out and in reading it. Following is a suggested form.

One sheet of paper can be used for the month for each station. At the top is a sketch of the front of the station showing the various display units, each assigned a number. On the bottom of the sheet are horizontal lines, one line for each day if daily sales are desired, or a line for each period. When a display space is decorated the station manager can note the date, and lists the items on display in each window. As sales are made the salesmen can make a mark opposite the item. At the end of the period the totals can be written in, and the report sent to the main office. Weather conditions may be noted daily if this information is desired.

Human Curiosity Utilized by Texas Co. In Exhibit to Advertise Its Oils

An early spring noonday crowd in The Texas Co.'s oil exhibit at 29 Broadway, New York

NEW YORK

INBORN interest of a large part of our people in mechanical and scientific things is being utilized by The Texas Co. to familiarize the public with the romance of the petroleum industry and with Texaco operations and products.

Utilization of such interest is being done by means of an educational exhibit which now is housed at 29 Broadway, New York, after two stands in midtown New York.

The present exhibit is downtown in the financial district. It is just across the street from 26 Broadway, famed home of Standard Oil Co. of New Jersey and Socony-Vacuum Corp. Its location at present led the "Bawl Street Journal," the New York Bond Club's annual burlesque newspaper, to congratulate R. C. Holmes, president of The Texas Co., for his magnanimity in so placing his exhibit that Standard Oil employees might be educated in the oil industry.

The first exhibit was opened last year on 57th Street, just off Fifth Avenue, in a district occupied by many fine shops including agencies of high-priced foreign and domestic automobiles. The next showing was at 43rd Street and Madison Avenue in the Grand Central Terminal district. The move downtown was April 1.

The opening day downtown 8500 persons passed through the doors from the opening at 12 noon to the close around 6 o'clock in the evening. That was on a Friday. The next full business day—Monday—9200 persons were counted. Each day since the count has run into many hundreds. Many of the visitors register. Two registers filled in the early days of the exhibit downtown reveal visitors from 28 states and 22 foreign countries. The Texas Co. has marketing facilities in all of our 48 states and in the principal foreign countries.

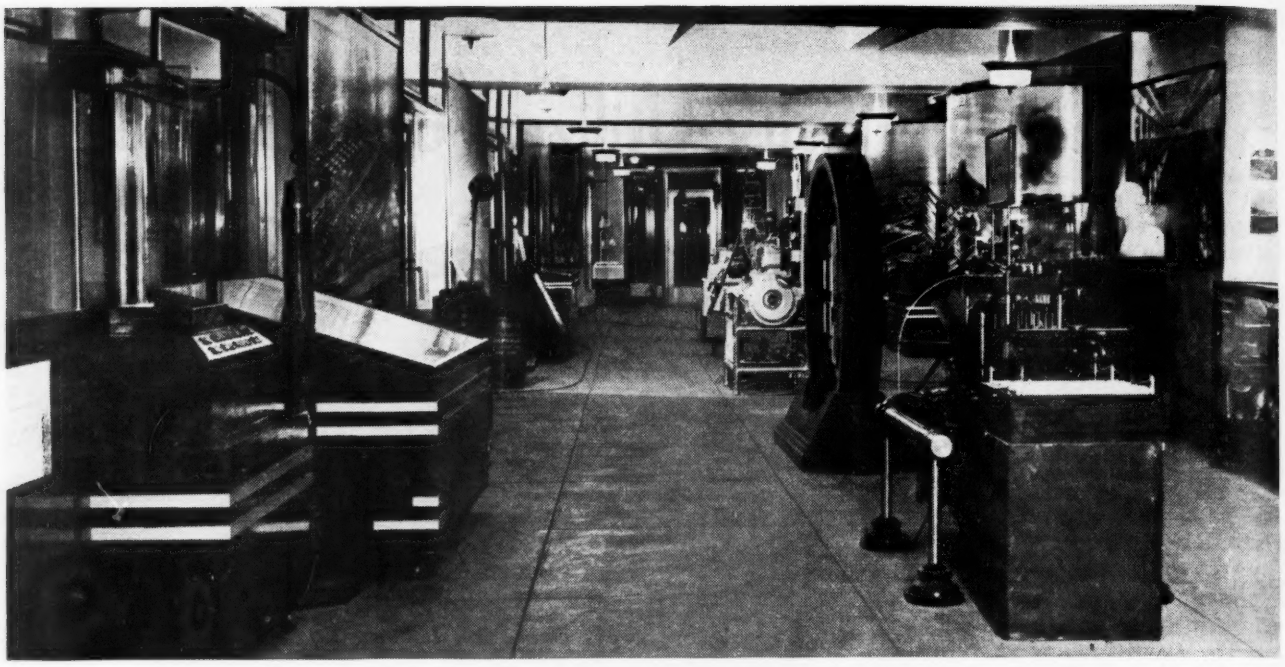
The exhibit shows by picture and model the producing and refining of petroleum. It also has pictures and models of numerous devices that consume petroleum products. How petroleum products are scientifically tested is shown with oil laboratory equipment. Wherever possible models and displays are animated.

One unique device vividly depicts the increase in gasoline taxes from 1923 through 1931. This is a series of glass tubes of graduated lengths and diameters to correspond to the increases in gasoline taxes. The tubes are filled with pale oil and bubbles are blown through the oil. In the later years represented the bubbles are larger and rise through the tubes at a much greater speed than the smaller bubbles in the tubes that represent the earlier years of gasoline taxation.

As a visitor to the exhibit enters 29 Broadway, a photo-electric cell counts his presence. The visitor first sees a cascade of Texaco motor oil and next a working model of a pumping rig. Around this rig circles a miniature electric train, that automatically stops and starts at a block signal on each trip. One figure "sharp" has determined the train runs 30 miles each day the exhibit is open.

In another part of the exhibit is a cable tool drilling rig with the bit working in a tube beneath the table on which the derrick is mounted.

There are cable and rotary



The Broadway end of The Texas Co.'s petroleum exhibit at 29 Broadway, New York

bits, reamers, fishing and other tools used in well drilling with which the public is not familiar.

The Texas Co. refineries are pictured. One large animated picture shows the manufacture of Havoline motor oils by The Texas controlled Indian Refining Co.

There are tubes of motor oil that teeter-totter. Rate of roll of steel balls through these tubes illustrates the varying viscosities of the several grades of oil.

A pyramid of paraffin wax forms the standard for a motor oil fountain. The oil comes out of spouts near the top of the pyramid and flows down glass tubes, giving the effect of large round streams of oil. Curious visitors poke the stream to learn the trick.

There are large photographic prints, some in color. Among the colored ones are: South Mountain oil field in California; Texaco terminal at Hong Kong; the Port Arthur refinery; a tanker being loaded; a centrifuge plant; wax presses; agitators, and pictures of Capt. Frank Hawkes flying over Paris and Mt. McKinley.

There is a large model of the motor vessel Australia. A model of a Rock Island locomotive that actually works, developing 0.875 horsepower. There are two smaller models of locomotives: one an oil burning Frisco and the other a Northern Pacific. Beside these are samples of rod and other greases used to lubricate locomotives. There are many samples of industrial and technical oils, with cards telling of their uses.

The exhibit had the first Ford V8 engine shown in New York. This engine has been replaced by an improved Ford V8. Other engines in the exhibit include: Ford A; Plymouth with floating power demonstrator; Graham 8, Chevrolet 6, Chrysler marine; Elto and Evinrude outboard; Packard radial diesel airplane engine, and Mack truck engine with 1000-gallon centrifugal pump attached. Several of these engines are cutaway and motor driven so visitors may see what goes on inside.

A gasoline pump has an electric clock mounted in the glass globe which has the usual Texaco star also. Texaco designs have been worked into the globes of the lamps that illuminate the exhibit room.

A novel method used to show the expanse of Texaco operations is a wall cabinet in which are pictures of Texaco properties in many lands. The pictures are on glass and in color. They can be illuminated from the back. Central box placed is a revolving globe. Across the top are small silk flags of the countries in which are situated the properties illustrated.

As the globe revolves a picture of some property is illuminated and at the same moment a draft of air blows forth the flag of the particular country.

A United Press news printer keeps visitors acquainted with what is happening in the rest of the world. The printer is very popular in that it carries baseball scores. It attracts each afternoon many boys from the Levantine quarter of New York, a short distance from the exhibit. The boys are welcomed. They constitute possibly a corps of taxi and truck drivers of a few years hence.

These are but a few of the many things the exhibit contains to advertise the company and also the petroleum industry. Things are explained to visitors if the visitors so wish. Four salesmen act as guides and lecturers. Sometimes they are able to make some valuable contacts but direct selling at the exhibit is not done.

The staff also includes a manager, two road map clerks, and a mechanical force of four men —mechanic, plumber, electrician and carpenter.

An assistant vice-president is in direct charge of the show that makes use of our curiosity.

Announcing.....

The ROAD-RUNNER

RED BALL SERVICE

This rugged bird, world-famed for speed, power and endurance, has been chosen to symbolize the outstanding speed, power and mileage of Danciger Gasoline.

THE ROAD-RUNNER
PAISANO; CHAPARRAL COCK; WARBIRD; ETC.

This active bird is a resident of the Western States, and Old Mexico. It is the fleetest bird on foot connected with North Amercian species, which accounts for the sport it gives to parties, who often pursue it on horseback and with hounds. It is most seen on the ground, at which time its movements of the tail assume a variety of grotesque positions. When suddenly alarmed, it rises with a light, quick motion, and flies some hundreds of yards continuously with an ease that attests its ability to maintain its flight.

DANCIGER REFINERIES

A well known name that symbolizes better quality and better service. Strictly modern refineries, backed by a dependable supply of our own sweet crude and adequate tank car fleet---now under the exclusive operation and management of Danciger Refineries.

Petroleum Refractionating Corporation

now DANCIGER REFINERIES

HUNT BUILDING — TULSA, OKLAHOMA

WE DO NOT COMPETE WITH OUR CUSTOMERS

MERCHANDISING IDEAS

Grease Your Car Mr. Tourist?

The tourist is a great mythical customer of the business world who is supposed to spend millions of dollars annually to satisfy the desire or necessity for travel. It is difficult to separate his dollar from that of the home folk to arrive at an accurate picture of his importance, yet we know that the tourist contributes materially to the consumption of our products.

But what has the oil industry really accomplished in getting the maximum profit from the tourist trade? Very little. In general the tourist has been well served by the oil industry, but we have been lax in real selling. We have overlooked the great opportunity to sell lubrication service, we have missed a lot of this business because we have been afraid to ask the tourist to buy.

When it comes to service the oil industry leans backwards. In fact the tourist considers free road maps, rest room facilities, and travel information part of a station's service. Maps can be obtained at practically every station, so the prospective tourist has no difficulty in laying out a route. While on the road the tourist finds local highway information available at most any respectable looking station.

Several oil companies have done more. They have established touring bureaus. At no expense to the tourist these bureaus have many persons at work sending out maps for all sections of the country, marking out routes to fit special conditions, answering inquiries about road conditions, and keeping in touch with state highway departments on improvements and detours.

About rest rooms we must speak a little more softly. There are some outstanding examples, we mean rest rooms properly equipped and kept clean, but there is plenty of room for improvement of the national average. In the main, though, the tourist can find adequate accommodations if some judgment is used in the selection of a place to stop.

So far all this service brings only an intangible return. We know that if we are making touring as easy as possible, more motorists will take to the open road, and we have greater consumption of our products. That helps sell more gasoline, but what about motor oil and lubrication?

We have the tourist in the palm of our hand. He must come to us for gasoline, and he cannot escape the need to pull up to a gasoline pump at least every 200 miles. But that same tourist can cut the corners on buying oil and lubrication, and our weakness has been in not having enough nerve to ask the tourist to buy.

Undoubtedly every tourist can tell a story of driving thousands of miles without one word from a station man about lubrication. We recall, from our own experience in driving in many states, only two sales talks. One was in North Carolina. The salesman suggested an oil drain. The other was in Memphis. This salesman's company was putting on its spring campaign to change transmission and differential lubricant, so he approached every customer.

As a result of this lack of salesmanship the tourist's automobile is neglected and we are out a profit. We cannot pass off the issue by claiming the tourist will not buy. We do not know whether or not he will buy. We never ask him. We just take his order for gasoline, maybe we check the oil and sometimes sell a quart, but when it comes to real selling we do not have the nerve to actually ask the customer to buy.

A little study of a map will show that the required mileage for oil draining and lubrication can be run off in only a few days. Then there are special lubrication points at 2000, 2500 and 5000 miles that need attention. In fact, we wonder if an automobile is not a more frequent customer for lubrication service on the road than it is at home. It would seem that pounding a car around sixty miles an hour in the boiling sun to cover 1000 miles in three days or less would be harder than a 1000 miles driving around town. So why wait for the 500 or 1000 miles before the next lubrication job? Let's sell our tourists on the idea of leaning backwards and of giving their automobiles better attention during the days of fast, hard driving.

The only way to tap this market is to ask the tourist to buy. His license plates give some indication of how far he is from home. Any station salesman can find out the tourist's native state if he just looks at the front or rear of the car.

TOURISTS usually like to stretch their legs when they stop at a station, so the salesman has some time to put in a good word for his oil and lubrication service. A sales talk such as "I see you are from such-and-such a state. Fast driving and heat are hard on motor oil and grease and it is economical to have your car serviced frequently. We can do that for you here in just a few minutes, and there will be less wear and tear on your car and it will ride easier," would not be offensive.

If the tourist is not in need of such service he can gracefully turn down the salesman by saying he had it done just a few hundred miles back. But if the tourist shows some interest the salesman can continue by talking about his equipment and products, and work the automobile into the service department.

Practically all the oil draining and lubrication is purchased by the tourist by demanding such service, and we will not move less oil and grease if we try salesmanship for a change.

The Burnham Pioneer Says . . .

"Here is the man to think about now!"

FACTS ABOUT

"The Modern Oil for Modern Motors"

Patented refining process; "uncracked" in refining; no harmful heat or acid treating; "light ends" distilled off, making it "heart cut"—all lubrication.

Selected crude for bright clean color, absence of carbon and resistance to heat.

Fluid for lubrication in sub-zero temperatures that would chill ordinary winter oils to a stiff, gummy mass; *instant* lubrication in sub-zero weather —yet, stamina for heat and friction.

S.A.E. Gradings for every season, particularly adapted for high-speed, high-compression motors.

ORDER WINTER GRADES OF

BURNHAM "Tested" PALES

"the modern oil for modern motors"

now!

It is very well to be particular about the technical aspects of the motor oil you choose. But it is of even more importance to ask, "How will this oil appeal to the man at the wheel? Will it please him?"

From the motorist's viewpoint, no other winter oil has the sure, sane appeal of Burnham "Tested" Pales. The motorist sees that it is a free-flowing oil . . . and once it is in his crankcase, he knows that his car-starting difficulties are over—no matter how cold it may become. His battery stays up longer. His motor is protected from the threatening knocks that develop when a sluggish winter oil is used. He finds tangible satisfaction in Burnham "Tested" Pales . . . tells his friends . . . and comes back for more.

Think of the motorist and he will think of you. **Study the features of Burnham "Tested" Pales listed at the left . . . then mail the coupon for prices and full details contained in our interesting booklet, "The Tale of the Pale."**

In addition to Burnham "Tested" Pales, the complete Calumet line includes: Mid-continent and Pennsylvania motor and tractor oils in all gradings; greases; a complete line of specialty products.

CALUMET REFINING CO.

4323 So. Western Blvd., CHICAGO, ILL.

Branch: Guarantee Title Bldg., Cleveland, Ohio
Refinery: Burnham, Ill.

Refiners and Marketers of Petroleum Products.

RIP OUT AND MAIL TODAY

Calumet Refining Co.
4323 So. Western Blvd., Chicago, Ill.

Please send me "The Tale of the Pale" booklet and other information on Burnham "Tested" Pales in Winter Grades. (Attach coupon to your letterhead).

Name.....

Street.....

City..... **State**.....

"FILL 'ER UP WITH REGULAR!"

Is that music to your ears? It should be, for every time you hear that, profits are piling up.

Regular Gasoline is the life of your entire gasoline trade—it deserves every bit of publicity and sales-help you can possibly give it.

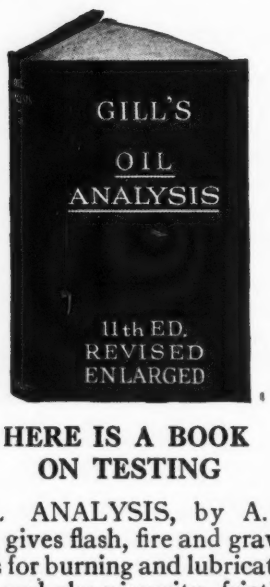
DYKEM COLORS

will give your Regular Gasoline an attractive color that will make it distinctive and easy to remember.

Write for samples and prices.

Dyestuffs & Chemicals, Incorporated
11th & Monroe Streets
St. Louis, Mo.

In Canada:
The Dykem Company of Canada Limited
14 Toronto Street, Toronto, Ontario.



HERE IS A BOOK ON TESTING

OIL ANALYSIS, by A. H. Gill, gives flash, fire and gravity tests for burning and lubricating oils, and also viscosity, friction, and evaporation tests for lubricating oils.

It shows how to examine an unknown oil to determine kind, quality and lubricating powers.

Send us your check for $4.00 and get a copy of it.

National Petroleum News
1213 W. 3rd Street Cleveland, Ohio

Roper Direct Drive Pump with Built-in Relief Valve

Roper Direct Drive Pumps with relief valve built-into the pump head are far more economical to buy and install than the older type of pumps with external by-pass assembly. Then too, this more modern type of pump requires less space . . . is simple and convenient to adjust . . . neat and compact in appearance . . . is self-contained . . . has no flange joints to leak . . . Relief Valve port areas amply large to permit handling liquids of a greater viscosity than gasoline . . . noiseless and non-clattering in operation . . . and does away with the elbows, union and piping of the old-style external by-pass assembly.

Relief Valve Built-in Pump Head
Geared-Head Motor
Small, compact
Only two moving parts
Direct Drive
Large Capacity
Positive Operation

The Roper Relief Valve, Built-in Head, can be applied to your present Roper equipment as it is interchangeable with the regular face plate.

Whether you are transferring gasoline, light oils or grease, there is a Roper that will do your job most economically. Equipment available with either standard or geared-head motors. Capacities from 1 to 300 G.P.M.

ROPER

Write for Complete Details

GEO. D. ROPER CORP., 470 Blackhawk Ave., Rockford, Illinois

Security Oil Co. of Baltimore had a fire recently and wrote us "We are perfectly satisfied with the settlement inasmuch as our claim was paid in full in 30 days." "We can recommend your service most highly." Are *you* insured with

437 Chestnut St.
PHILADELPHIA

National
PETROLEUM MUTUAL
Fire Insurance Company

Oil Companies Spend $5½ Million For Radio Network Time

NEW YORK

OVER 5½ million dollars were spent by oil companies for network time on the air to entertain and to advertise to radio listeners during the past five years and for the first three months of this year.

These figures are from a compilation in a booklet on "A Study of the Network Broadcast Advertising of the Lubricants and Petroleum Industry," issued by the National Broadcasting Co.

The petroleum group numbered 17 in 1931, and ranked third in a list of 21 major industrial classifications. Expenditures of this group ranked seventh in gross revenue derived from network broadcasts.

Statistics on oil company radio expenditures are for time only. Cost of talent, and the preparation of the programs, are not included. Local radio programs also are not included in the tabulations.

Total expenditures, for air time, of these 26 oil companies was $5,695,567 for the period reported. Two companies, Cities Service Oil Co. and Tide Water Oil Sales Corp., were on the air prior to 1927, but these earlier expenditures were not reported in the booklet tabulation.

The peak of expenditures for this period was in 1930, at $1,809,027. In 1929 expenditures were $1,160,189, and in 1931 they were $1,499,296. For the first quarter of 1932 expenditures were $488,960.

The National Broadcasting Co.'s compilation shows no petroleum advertisers on other networks in 1927 or 1928. N. B. C. share of network advertising dollar volume was 94.8 per cent in 1929, 83.3 per cent in 1930, and 85.9 per cent in 1931.

Gross expenditures of lubricant and petroleum refiners for broadcast advertising are published in the accompanying table. The original table, published by the National Broadcasting Co., does not include Cities Service Oil Co., as a petroleum advertiser, as other interests of the company are advertised along with its petroleum products. NATIONAL PETROLEUM NEWS has included Cities Service, and added its annual expenditures to the totals, as the industry generally classifies this broadcast as oil company advertising.

A resume of oil company network broadcasts follows:

Associated Oil Co., "Spotlight Revue," five NBC Pacific orange stations, Saturday evening.

Barnsdall Refineries, "Barnsdall Musical Moments," 15 Columbia Broadcasting Co. stations, Sunday evening.

California Petroleum Corp., five NBC Pacific coast stations, half an hour, once a week.

Cities Service Oil Co., "Cities Service Concert," Cavaliers and Jessica Dragonette, soloist, 36 NBC red stations, Friday evening. Started NBC facilities on Dec. 29, 1925.

Colonial Beacon Oil Co., "Colonial Beach Lights," 7 NBC red stations, Monday evening.

Continental Oil Co., "Exploring America with Conco and Carveth Wells," 10 NBC red stations, Sunday morning.

General Petroleum Corp., "General Petroleum Memory Lane," 7 NBC Pacific coast orange stations, Tuesday evening.

Gilmore Oil Co., "Gilmore Circus," 4 NBC Pacific stations, Saturday evening.

Mid - Continent Petroleum Corp., 5 NBC red mid-western stations, half hour evenings, once a week.

The Pennzoil Co., "Pennzoil Pete," 26 NBC blue stations, Sunday evening.

The Pure Oil Co., "Pure Oil Concerts," 21 NBC blue stations, Tuesday evening.

The Quaker State Oil Refining Co., 50 CBS stations, half hour evenings, once a week.

Richfield Oil Co. of California, "Richfield News Flashes," 6 NBC Pacific orange stations, daily except Saturday evening.

Shell Petroleum Corp., "Shell Happy Time," 7 NBC mountain and Pacific stations, daily except Sunday evening; and "Sign of the Shell," 32 NBC red stations, Monday evening.

Skelly Oil Co., "The Skellodians," 8 NBC red stations, Saturday evening.

Sinclair Refining Co., "Sin-

(*Continued on page* 43)

Gross Expenditures For Radio Network Time by Oil Companies

(Cost of talent not included)

Name of company	1927	1928	1929	1930	1931	1932 Jan.-March	Total
Associated Oil Co.	.....	$33,612	$42,624	$42,861	$74,787	$19,932	$213,816
Barnsdall Refineries	.....	.....	.....	45,845	53,948	28,811	128,604
California Pet. Corp.	$2,200	12,375	.....	.....	.....	.....	14,575
Cities Service Oil	199,150	238,130	279,533	387,779	405,226	111,798	1,621,616
Colonial Beacon	.....	.....	.....	41,435	4,375	.....	45,810
Continental Oil	.....	.....	.....	44,902	2,712	8,817	56,431
General Pet.	.....	6,187	.....	19,250	45,500	11,375	82,312
Gilmore Oil	.....	.....	.....	30,310	31,250	17,552	79,112
Mid-Continent Pet.	.....	.....	3,874	.....	.....	.....	3,874
Pennzoil	.....	.....	.....	70,805	57,692	37,954	166,451
Pure Oil	.....	.....	147,357	170,074	8,717	.....	326,148
Quaker State	.....	.....	.....	113,637	.....	.....	113,637
Richfield, Calif.	.....	.....	1,375	.....	122,071	48,712	172,158
Shell	4,250	65,350	60,060	340,712	197,766	.....	668,138
Skelly	.....	.....	51,263	4,572	.....	.....	55,835
Sinclair	.....	.....	.....	22,592	.....	10,500	33,092
Standard, Calif.	5,500	41,042	84,624	91,705	77,182	22,070	327,123
Standard, Indiana	.....	12,845	82,358	20,220	4,560	.....	119,983
Standard, N. J.	.....	.....	.....	.....	54,645	22,934	77,579
Standard, N. Y.	8,725	56,850	72,153	57,566	67,159	28,046	290,499
Sun	.....	.....	.....	25,096	.....	.....	25,096
The Texas Co.	.....	10,123	.....	.....	.....	15,025	25,148
3-in-1 Oil Co.	.....	26,000	25,868	.....	.....	.....	51,865
Tidewater	.....	.....	152,261	11,975	62,317	.....	226,553
Union Oil	.....	14,491	26,069	55,802	8,700	17,153	122,215
Vacuum Oil	1,265	.....	130,770	211,889	220,689	88,281	652,894
Total	221,090	517,005	1,160,189	1,809,027	1,499,296	488,960	5,695,567

Note: Figures taken from National Broadcasting Co. booklet "A Study of the Network Broadcast Advertising of the Lubricants and Petroleum Industry." Cities Service Oil Co. added to table, and included in totals.

Compilation Of Mid-Continent Refinery Operations

All Rights Reserved to the National Petroleum Publishing Co.

Mid-Continent Refinery Operations, Week Ended Nov. 4 (By Teletype)

	Kansas	Oklahoma	North & Cent. Texas	West Texas	North La.-Ark.	Total Week Ended Nov. 4
Plants Operating.....	10	23	23	10	10	76
Da. Av. Cap. Bbls....	94,000	162,500	107,400	71,500	60,700	496,100
Da. Cracking Capacity	53,200	64,600	23,100	26,250	31,700	198,850
Da. Av. Crude Runs..	54,739 — 11.2	51,630 — 21.5	43,133 — 10.1	9,555 + 11.6	36,948 + 3.4	196,005 — 10.8
Da. Av. Other Oil....	8,548 + 30.7	6,231 — 7.0	1,925 — 14.4	434 — 0.7	13,231 — 8.8	30,369 — 0.2
GASOLINE—Gallons						
Stocks, Oct. 28.....	24,582,000	38,070,000	21,915,000	5,798,000	4,543,000	94,908,000
Prod. 10-28 to 11-4...	10,489,000 — 15.7	10,146,000 — 16.5	7,642,000 — 0.3	958,000 — 0.3	5,826,000 — 2.5	35,061,000 — 10.6
Ship. 10-28 to 11-4....	11,138,000 + 27.2	11,201,000 — 5.9	7,295,000 — 15.4	988,000 — 30.9	5,587,000 — 0.9	36,209,000 — 0.4
Stocks, Nov. 4.....	23,933,000 — 2.6	37,015,000 — 2.8	22,262,000 + 1.6	5,768,000 — 0.5	4,782,000 + 5.3	93,760,000 — 1.2
Ratio Sales to Prod...	106.2%	110.4%	95.5%	103.1%	95.9%	103.3%
KEROSINE—Gallons						
Stocks, Oct. 28.....	5,047,000	6,019,000	1,455,000	22,000	485,000	13,028,000
Prod. 10-28 to 11-4...	1,487,000 — 21.0	832,000 — 36.7	739,000 + 39.2	....	329,000 — 11.3	3,387,000 — 17.4
Ship. 10-28 to 11-4....	1,203,000 — 6.2	1,294,000 — 27.6	730,000 — 10.9	....	253,000 — 13.7	3,480,000 — 16.8
Stocks, Nov. 4.....	5,331,000 + 5.4	5,557,000 — 7.7	1,464,000 + 0.6	22,000	561,000 + 15.7	12,935,000 — 0.7
Ratio Sales to Prod...	80.9%	155.5%	98.8%	....	76.9%	102.7%
FURNACE OIL—Gallons						
Stocks, Oct. 28.....	1,195,000	5,292,000	83,000	33,000	36,000	6,639,000
Prod. 10-28 to 11-4...	193,000 — 63.9	672,000 — 25.0	89,000 — 19.1	2,000	55,000 +129.2	1,011 000 — 35.5
Ship. 10-28 to 11-4...	366,000 + 2.5	597,000 + 93.2	30,000 — 66.3	2,000	59,000 +110.7	15.054,000 + 34.3
Stocks, Nov. 4.....	1,022,000 — 14.5	5,367,000 + 1.4	142,000 + 71.1	33,000	32,000 — 11.1	6,596,000 — 0.6
Ratio Sales to Prod...	189.6%	88.8%	33.7%	100.0%	107.3%	104.3%
GAS OIL—Gallons						
Stocks, Oct. 28.....	6,265,000	13,098,000	4,067,000	2,827,000	2,714,000	28,971,000
Prod. 10-28 to 11-4...	—43,000	1,300,000 — 16.5	147,000 — 72.0	335,000 + 32.4	1,921,000 — 15.4	3,660,000 — 30.7
Ship. 10-28 to 11-4....	975,000 +335.3	734,000 — 52.8	244,000 +577.8	401,000 +146.0	1,953,000 — 2.1	4,307,000 + 8.4
Stocks, Nov. 4.....	5,247,000 — 16.2	13,664,000 + 4.3	3,970,000 — 2.4	2,761,000 — 2.3	2,682,000 — 1.2	28,324,000 — 2.2
Ratio Sales to Prod...	.....	56.5%	166.0%	119.7%	101.7%	117.7%
FUEL OIL—Gallons						
Stocks, Oct. 28.....	11,846,000	48,682,000	63,780,000	11,227,000	12,266,000	147,801,000
Prod. 10-28 to 11-4...	5,462,000 — 0.7	2,446,000 — 11.5	3,470,000 — 28.3	1,613,000 + 27.0	3,751,000 + 3.2	16,742,000 — 7.0
Ship. 10-28 to 11-4...	4,530,000 — 2.6	3,385,000 —22.71	4,081,000 — 60.1	2,539,000 +174.2	3,788,000 — 3.9	18,423,000 — 24.0
Stocks, Nov. 4.....	12,678,000 + 7.0	47,743,000 — 1.9	63,169,000 — 1.0	10,301,000 — 8.2	12,229,000 — 0.3	146,120,000 — 1.1
Ratio Sales to Prod...	84.8%	138.4%	117.6%	157.4%	101.0%	110.0%

Gasoline Produced by Various Methods, Week Ended Nov. 4

	Kansas	% of Total	Oklahoma	% of Total	North & Cent. Texas	% of Total	West Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run.....	5,123,000	48.9	5,701,000	56.2	3,838,000	50.2	803,000	83.8	2,293,000	39.4	17,758,000	50.7
Cracked.....	4,430,000	42.2	3,263,000	32.2	2,809,000	36.8	123,000	12.8	3,052,000	52.4	13,677,000	39.0
Natural.....	936,000	8.9	1,182,000	11.6	995,000	13.0	32,000	3.4	481,000	8.2	3,626,000	10.3
Total.....	10,489,000		10,146,000		7,642,000		958,000		5,826,000		35,061,000	

+ or — columns are % change over previous week.

Gasoline Stocks Again Reduced in Mid-Continent

Staff Special—By Teletype
TULSA, Nov. 7

GASOLINE stocks were reduced 1,148,00 gallons at 76 Mid-Continent refineries the week ended Nov. 4, when output was cut 4,200,000 gallons and shipments were only 140,000 gallons less than in the week before. Gasoline stocks were lowered in Kansas, Oklahoma and West Texas.

Crude oil runs were reduced 23,000 barrels daily average at the 76 plants. The cuts were in the Kansas Oklahoma, and North and Central Texas districts.

Output of kerosine was 713,000 gallons less than in the week before. Shipments were 703,000 gallons less but stocks were reduced 93,000 gallons.

Furnace oil output was reduced 556,000 gallons. With shipments up 269,000 gallons, stocks were lowered 43,000 gallons.

Gas oil stocks were reduced 647,000 gallons and fuel oil stocks 1,681,000 gallons.

Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended Nov. 4. Change in stocks figured from Oct. 7.

GASOLINE

	Gallons
Production	151,308,000
Shipments	148,339,000
Net change in stocks	+2,969,000
Ratio sales to production	98.0%

KEROSINE

	Gallons
Production	15,817,000
Shipments	16,992,000
Net change in stocks	—1,175,000
Ratio sales to production	107.4%

FURNACE OIL

	Gallons
Production	4,951,000
Shipments	5,033,000
Net change in stocks	—82,000
Ratio sales to production	101.7%

GAS OIL

	Gallons
Production	16,216,000
Shipments	15,232,000
Net change in stocks	+984,000
Ratio sales to production	93.9%

FUEL OIL

	Gallons
Production	74,038,000
Shipments	91,216,000
Net change in stocks	—17,178,000
Ratio sales to production	123.2%

Radio Advertising

(*Continued from page* 41)

clair Minstrels," 6 NBC blue stations, Monday evening.

Standard Oil Co. of California, Standard Symphony, 14 Pacific orange stations, Thursday evening; and "Standard School Broadcast," 8 Pacific orange stations, Thursday morning. Expenditures for time do not include cleansing fluid advertising.

Standard Oil Co. of Indiana, NBC central group, Sunday afternoon.

Standard Oil Co. of New Jersey, "Believe It Or Not," Ripley, 7 NBC blue stations, Wednesday and Friday evening. Expenditures for time do not include Stanco advertising.

Standard Oil Co. of New York, "Soconyland Sketches," 8 NBC red stations, Monday evening.

Sun Oil Co., "Sunoco Show," 10 NBC blue stations, Tuesday evening.

The Texas Co., "Ed Wynn and The Texaco Fire Chief Band," 55 NBC red stations, Tuesday evening.

Three-In-One Oil Co., 10 NBC blue stations, half hour evenings, weekly.

Tide Water Oil Sales Corp., 15 CBS stations, 15 minutes evenings, three times a week.

Union Oil Co., "Disturbers of the Air," 8 Pacific stations, Friday evening.

Vacuum Oil Co., "The Mobiloil Concert," 27 NBC red stations, Wednesday evening.

No Federal Tax Refund On Gasoline Losses

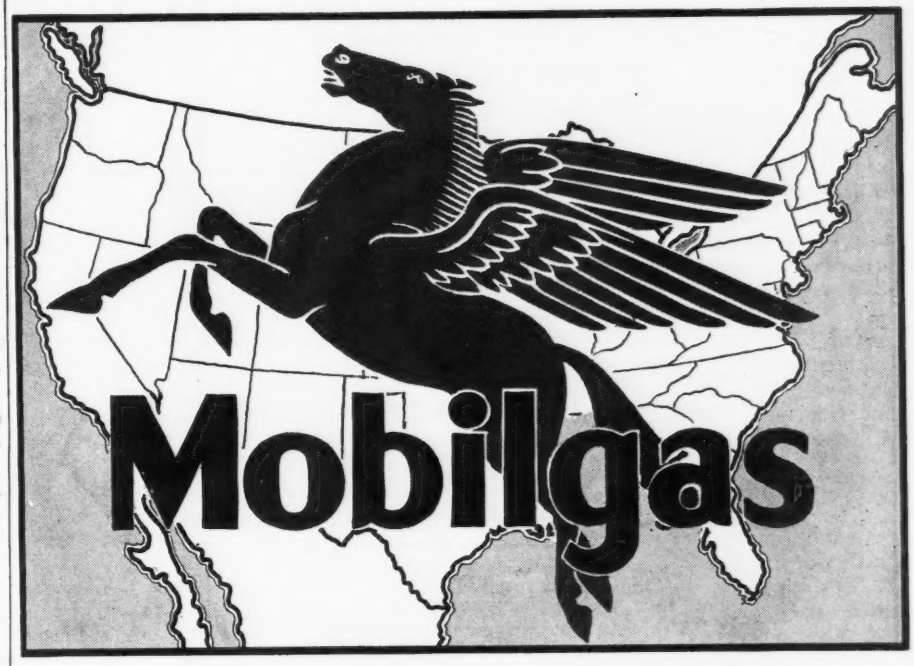
WASHINGTON, Nov. 7.—There is no possibility of obtaining a refund of the federal gasoline tax on goods destroyed by fire or lost through any other accident while in the hands of distributors. Such is a ruling of the Commissioner of Internal Revenue.

"The tax. . . . is imposed upon, and accrues at the time of, the sale by the importer or producer of gasoline," the commissioner held. "The subsequent use or final disposition of such gasoline has no bearing on the tax. Therefore, no refund of tax may properly be made where gasoline has been lost through fires or other causes."

In another ruling the commissioner announced that industrial benzol is not taxable as is motor benzol. If, however, the industrial benzol is subsequently given further processing to make it suitable for motor fuel or is blended with motor fuel, it then becomes taxable.

In a ruling on lubricating oil reclamation the commissioner has held that a railroad company which clarifies used oil is liable for the tax on the oil so reclaimed.

Now A COAST-TO-COAST FAVORITE FOR WHITE EAGLE JOBBERS



with CLIMATIC CONTROL

Alert distributors will appreciate the advantages of this *national* brand gasoline—MOBILGAS! Its increased local prestige and wider popular appeal mean increased sales . . . And Mobilgas is the only gasoline with Climatic Control—a feature which is placing it in the lead—both in popularity and performance! Jobbers in White Eagle territory should wire or write immediately for our attractive proposition.

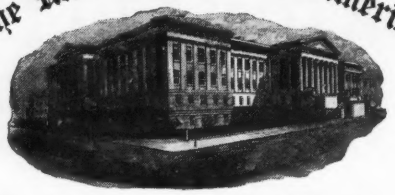
WHITE EAGLE OIL CORPORATION

A Socony-Vacuum Company

KANSAS CITY

No. 49,882.

The United States of America



To all to whom these presents shall come:

This is to Certify That by the records of the UNITED STATES PATENT OFFICE it appears that The Conewango Refining Co. of Warren, Pennsylvania, a corporation organized under the laws of the State of Pennsylvania did, on the 4th day of November, 1905, duly file in said Office an application for REGISTRATION of a certain

TRADE-MARK

for Cylinder Lubricants and Lubricant Stock,

that it duly filed therewith a drawing of the said TRADE-MARK, a statement relating thereto, and a written declaration, duly verified, copies of which are hereto annexed, and has duly complied with the requirements of the law in such case made and provided, and with the regulations prescribed by the COMMISSIONER OF PATENTS.

And, upon due examination thereof, it appearing that the said applicant is entitled to registration of said TRADE-MARK under the law, the said TRADE-MARK has been duly registered to The Conewango Refining Co. and its successors or assigns, in the UNITED STATES PATENT OFFICE, this 20th day of February, 1906

This certificate shall remain in force for TWENTY YEARS, unless sooner terminated by law.

In testimony whereof I have hereunto set my hand and caused the seal of the PATENT OFFICE to be affixed, at the city of Washington, this twentieth day of February in the year of our Lord one thousand nine hundred and six, of the Independence of the United States one hundred and thirtieth.

E. B. Allen
Commissioner of Patents.

TRADE-MARK.

No. 49,882. REGISTERED FEB. 20, 1906.

THE CONEWANGO REFINING CO.

CYLINDER LUBRICANTS AND LUBRICANT STOCK.

APPLICATION FILED NOV. 4, 1905.

ORIGINAL CONEWANGO GENUINE

H-M OIL

WITNESSES:
E. M. Saywell
Jno. F. Oberlin.

PROPRIETOR:
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Refinery - Tank Wagon Markets

Refinery Prices Ease Slightly As Tank Car Buying Slows Down

CLEVELAND, Nov. 7

ACTIVITY slowed down somewhat in refinery markets last week. The tide of rising prices appeared to have subsided for the present. While there was no outstanding weakness apparent as far as most markets were concerned, prices generally were a shade easier.

Interest in trade circles all over the country but particularly in the Mid-Continent continued to center on the Texas crude oil situation. The calling of a special session of the Texas legislature to enact a law prohibiting the economic waste, as well as the physical waste, of crude oil revived the hope that the current levels of crude prices would not be endangered.

Jobbing demand for gasoline was comparatively slow in all markets. In the east, the slackening of demand was considered seasonal. In the west, it was thought that buyers were hesitant about making commitments because of the uncertainty of the Mid-Continent crude situation.

Distress offerings of gasoline from some of the smaller refineries were more numerous in the west, particularly in North and East Texas. While the volume of material involved was comparatively small, in the period of light trading it was considered a market factor. Prices generally were 0.125 cent lower in the Mid-Continent.

There were no changes in eastern seaboard quotations but as yet there has been little trading at the higher levels established some two weeks ago. Buyers were protected on their requirements for 15 to 20 days at the lower prices before quotations were advanced. In Pennsylvania, prices were steady but curtailed demand was said to be causing stocks to pile up in one or two spots.

Jobbing demand for burning oils was perhaps more active than for other products although buying of these oils was on a smaller scale than it has been since the middle of October. Mid-Continent prices held their ground well; some zero oils continued to advance due largely to scarcity. Prices in other areas also were generally steady.

Lubricating oils were soft. Prices of the standard grades of bright stock and neutral oil were 0.5 cent lower in Pennsylvania and Mid-Continent bright stock prices were down 1.5 cents on all grades. Little, if any, improvement was noted in the call for lubricating oils.

Cargo markets were quiet. Domestic prices at the Gulf remained steady but export quotations were off 0.125 to 0.25 cent. Lower prices from Roumania were said to have caused the cut in American quotations.

Wax markets were steady to higher.

All Grades Fuel Oil Advance At Chicago

Staff Special

CHICAGO, Nov. 5.

WITH heating oils swinging more definitely into their season of highest consumption buying was brisk in the Chicago market the first week of November and prices moved upward.

Advances of 0.125 cent a gallon were made by gas oil. Fuel oil prices gained from 2.5 to 5 cents a barrel depending on the grade. Furnace oil registered slight gains while kerosine was firmly entrenched at levels established late last month.

Some of the advance was attributed to the increase in tank wagon prices in the Chicago district. These advances were announced the last week in October to become effective Nov. 1. There undoubtedly would have been a sizeable volume of buying the last week in October if the material had been available. Both buyers and sellers reported, however, that many grades of heating oils were all but unobtainable for prompt shipment and refiners were showing considerable reluctance when seasonal contracts were suggested.

The high gravity, low cold test fuel oil was exceptionally scarce. One seller said he had tried diligently to obtain one car to apply on an order and had been unsuccessful so far.

Several sellers advanced 18-22 gravity, zero cold test fuel oil 2.5 to 5 cents a barrel in the Chicago switching area as reports reached here that the material was scarcer in the Mid-Continent area. The advances in these more popular grades naturally had sufficient influence to bring up the prices for the other grades.

Several refiners in the Mid-Continent were reported in the market for various grades of gas oil and in a few instances had the output of some plants completely contracted. This was true particularly of the ordinary gas oil which was suitable for further processing in cracking units.

The gasoline market was quiet the entire week. A few traders had anticipated an increase in buying early in the week but jobbers apparently continued to obtain most of their supply via contract. Shipments on contract accordingly were fair, most sellers said, while open market trading suffered.

Some irregularity developed about

Summary of Group 3 Quotations for U. S. Motor Gasoline
In Effect Nov. 7, 1932

	Below 57 Octane No.	57-65 Octane No.	Above 65 Octane No.
Okla.	4.625-4.75	5.00-5.25	5.375-5.50
Kans.	4.625-4.75	5.00-5.25	5.375-5.50
N. Tex.	4.50-4.625	5.00-5.125	5.25 5.375
W. Tex.	4.625	5.00-5.125	5.25-5.375
La.-Ark.	4.50-4.625	5.00-5.125	5.25-5.375
Ind.-Ill.	4.50-4.625	.....	.....

Prices are those quoted on the basis of f.o.b. Group 3 by refiners in the districts designated.

Current Prices of Principal Mid-Continent Refined Products

Prices shown are in Group 3 basis and extended to date shown in Refinery Market Table Section of this issue

the middle of the week, with occasional offerings under the prevailing quotations. A check indicated the bulk of these offerings originated at a Texas refinery which has been operating under protection of an injunction pending final decision on a proration case before the Texas Supreme Court.

Except for that spot and one or two in East Texas where the plants operate spasmodically and lack of storage necessitates prompt movement of production, the gasoline market held its ground well.

Considerable attention was being directed to Texas as a result of the convening of the Texas legislature. Reports that the session had actually convened caused more optimism in the Chicago area. It was believed generally here that a proration law would be passed which would keep the crude situation sufficiently in hand to prevent an excess of gasoline production and a corresponding decline in tank car prices.

Tank car marketers meanwhile showed little interest in the market as far as future business was concerned, and refiners were just as reluctant to make any "deferred shipment" sales.

Gas Tax Division Under Fire In Indiana Politics

INDIANAPOLIS, Nov. 3.

EXCESSIVE cost of operating the Indiana gasoline tax division office and an alleged shortage in collections, arrived at by comparing actual gallonage reported for taxation and that reported by the inspection department, are major charges in the current political campaign against the Indiana auditor of state who is standing for re-election.

These charges were presented before the oil industry of the state in a surprise address at the Indiana Petroleum Association convention here yesterday by L. O. Chasey, secretary to the governor, and a Republican. Floyd E. Williamson, present auditor of state, is a Democrat and running for a second term.

Mr. Chasey's subject was announced on the program and in his introduction to the convention as "Tax Evasion In Indiana." He promptly departed from the subject and began a recital of campaign facts, against the present auditor's administration, that have been used widely throughout the state in speeches and in newspaper political advertisements.

At the close of the afternoon's meeting Louis J. Scheidt, marketer from Columbus, Ind., and vice-president of the association, gave a short address pointing out that the association was not a political organization and that the present auditor had been friendly to oil interests.

Mr. Chasey presented campaign facts comparing the gasoline tax division record for 1931 and 1932 under Mr. Williamson with that of 1929 and 1930 under A. N. Bobbitt, a Republican. Mr. Bobbitt at present is in charge of the speaker's bureau for the Republican party in Indiana, and is not running for office. Highlights of the comparison follow:

Under Bobbitt's two-year administration cost of the gasoline tax division, including personal service, other operating expenses and equipment, was $71,143.65.

Under Williamson's two-year administration (1931 and 1932) cost of the division on these three items was $147,734.74.

Eleven persons were employed by Bobbitt.

Thirty-three persons were employed by Williamson.

In 1929 (Bobbitt's adminstration) the oil inspection department reported 450,842,400 gallons of gasoline, and the tax

Prices A Year Ago

Nov. 9, 1931

	Oklahoma	Penna.
58-60 U. S. Motor (57-65 Octane No. in Okla.)	5.00-5.25	4.375-4.75
Grade A Natural Gasoline	4.75-5.00	.....
Kerosine (Okla. 41-43; Pa. 47 w.w.)	2.125-2.25	4.00-4.25
Fuel Oil (Okla. 24-26; Pa. 36-40)	$0.35-$0.375	2.50-3.00
Crude (Okla. 35-35.9)	$0.75	$1.95
Chicago tank wagon (including 3c tax)		15.00c

was collected on 447,788,165 gallons. The difference was 3,054,235 gallons.

In 1931 (Williamson's administration) the inspection department reported 483,647,200 gallons of gasoline, and the tax was collected on 475,310,879 gallons. The difference was 8,336,321 gallons.

By subtracting the lost gallons in Bobbitt's administration from that in Williamson's administration there is a difference of 5,282,286 gallons. At 4 cents tax rate this amounts to $211,291.44, lost by the Williamson administration in 1931 over 1929.

The speaker continued by showing that the Williamson administration in two years collected taxes of $2,756,955.42 more than in the Bobbitt administration, but that a comparison of inspection department gallonage reports shows that the excess should have been $4,115,834, or a loss in collections under Williamson of $1,358,878.58 in the two years.

Analysis of 1932 inspection and collection figures, by Mr. Chasey, showed a loss of 29,576,047 gallons or $1,183,041.88.

Mr. Chasey pointed out a greater cost of administering the gasoline tax division, and greater personnel, by Williamson yet a decrease in the amount of tax that should have been collected.

In refutation of these campaign facts, presented at the association's convention, and in newspaper political advertisements and in addresses throughout the state, Joseph M. Treacy, Sr., collector of the gasoline tax, in the state auditor's office, gave NATIONAL PETROLEUM NEWS the following information.

The gasoline tax division in 1931 and 1932 did spend more money and did employ more men and women.

This additional expenditure was necessary for a number of reasons. More auditors were required as the previous auditor (Bobbitt) had left a heritage of records of gallons reported and taxes paid, but no audits, hence it was necessary to start from the ground up with complete audits of oil company records and the work is not completed yet.

More field men were needed also, to check on tax evasion. Bridges across the Ohio river from Kentucky into Indiana were checked on occasion with 24-hour watches. Refineries in the state were checked also, with men on duty 24-hours.

Refunds required more detail work. Through checking refund claims the department under the Williamson administration can show a record of more refunds handled over the corrseponding month of the previous year, but a smaller amount refunded. There were 99,765 more refund claims in 1931 and 1932 than in 1929 and 1930.

The Williamson administration had operated with a personnel of 31, and the auditor's annual report dated Sept. 30, 1930 shows 17 employes in the gasoline tax division. (Chasey claimed 11 Bobbitt employes against 33 for Williamson).

Delinquent tax collections and penalties in 1931 and 1932 amount to about $223,000. The Knickerbocker Refining Co. case, in Lake county Indiana, was labeled a $125,000 tax evasion case, the compromise was for $25,000, and there still is $3,000 due on the settlement. This case came in Bobbitt's administration.

The differences in figures on gallonage reported for taxation and that reported through the inspection department are explained as not being open for comparison.

Inspection of petroleum products in Indiana is under the food and drug department. Inspectors take the shell capacity of the tank car in reporting volume. Also, all gasoline received in the state is reported through the inspection department, but not all of this gasoline appears on the taxable gallonage. Diverted tank cars might show up in the inspection department record, but the tank cars would not show up in the gasoline tax division records. Gasoline passing through bulk plants in Indiana, but trucked to service stations or consumers in other states also would make a discrepancy in the records.

A change in the Indiana tax law, effective April 1, 1929, offers another opportunity for a difference in reports between these two departments. Previous to this date marketers were not allowed a percentage for shrinkage. After this date marketers could report tax gallons either on sales, or on purchases. If the marketer elected to report purchases he was allowed a 3 per cent deduction for shrinkage.

Out of about 300 marketers making gasoline tax reports only 39 are using the sales methods, the others reporting on purchases and earning the 3 per cent shrinkage allowance.

Another point on inspection department reports concerns the accuracy of the gallonage turned in by inspectors. The board of auditors in 1930 found eleven inspectors who were pocketing the inspection fees, and inspectors cannot be removed without consent of the governor.

"If these inspectors were knocking down on the fees, were they reporting the volume of gasoline inspected?" asked Mr. Treacy.

The gist of the statistics on the gasoline tax division presented at the convention by Mr. Chasey were used in an address Friday by Governor Leslie at a Republican rally in Winamac, Ind.

Mid-Continent Refinery Markets

Trading Quiet; Prices Generally Steady

Staff Special
TULSA, Nov. 5

INTEREST of the oil trade in the week ended Nov. 5 continued to center on the Texas crude oil situation and the attempts to change the proration law in that state to enable them to control production from an economic as well as a physical waste standpoint. To this end, Governor Sterling called a special session of the legislature which convened Nov. 4 but up to the close of business Nov. 5 there had been nothing definite done.

Buyers generally remained in a hesitant mood, probably awaiting results of the legislative meeting, and consequently the spot gasoline market showed little life. Several refiners reported their contract sales showed an improvement toward the end of the week.

Gasoline prices generally were held without any material change in most Mid-Continent areas, although lower priced material began appearing in parts of Texas before the end of the week. Several refiners apparently were in need of gasoline instructions and reduced their quotations in an effort to move some goods. U. S. Motor, below 57 octane was offered at 4.5 cents compared with a low price of 4.75 cents at the beginning of the week. Apparently the reason that buyers were staying out of the market was not particularly one of price, as these refiners who made the price reductions said their spot demand remained very slow.

Reports were current throughout the week that low octane gasoline was being offered at prices considerably under general markets levels by refiners in some Texas areas, particularly those operating on East Texas crude. However, no definite information regarding these reports was available and some traders said that in most cases the low prices were on gasoline which had been sold to marketers for shipment prior to Nov. 1 and which still was in transit. Others said they believed there was some gasoline being offered at low prices by a few small refiners, but that the quantity was limited and that these plants were operating on a day-to-day basis if they could get crude, and were not potential suppliers for any steady supply.

Natural gasolines lost ground during the week after starting on what appeared to be a steady price basis of 3.25 cents for Grade 26-70 both in Oklahoma and Texas. However, buying by refiners was reported to be on a lower basis than had been expected, due it was thought, to the sluggish movement of refined gasolines to job-

Chicago Tank Car Market

Following prices are in cents per gallon, except fuel oil in barrels, in tank car lots, representing majority of sales to jobbers on Group 3 freight basis, although shipments may originate in other refining districts, such as North, West and East Texas, Louisiana, Arkansas, Indiana, Illinois, Kentucky, etc. Prices do not include state or federal taxes levied on some products.

	Prices Nov. 7	Prices Oct. 31	Prices Oct. 24
50-52, 437 e.p. naphtha	4.50	4.50	4.25 – 4.375
U. S. Motor Gasoline:			
Below 57 octane number	4.50 – 4.75	4.625– 4.75	4.50 – 4.625
57-65 octane number	5.00 – 5.25	5.00 – 5.25	4.875– 5.00
Above 65 octane number	5.25 – 5.50	5.25 – 5.50	5.125– 5.375
60-62 400 e.p. gasoline:			
Below 57 octane number	4.75 – 4.875	4.75 – 4.875	4.50 – 4.75
57-65 octane number	5.125– 5.25	5.125– 5.25	5.00 – 5.125
Above 65 octane number	5.375– 5.625	5.375– 5.625	5.25 – 5.50
64-66 375 e.p. gasoline	5.00	5.00	4.75 – 4.875
68-70 350-360 e.p. gasoline	5.125– 5.375	5.125– 5.375	4.875– 5.00
Aviation Gasoline, below 73 octane number	5.375– 5.50	5.375– 5.50	5.25 – 5.375
41-43 water white kerosine	3.625– 3.75	3.625– 3.75	3.375– 3.50
42-44 water white kerosine	3.75 – 3.875	3.75 – 3.875	3.50 – 3.625
38-40 prime white Furnace Oil	*3.50	*3.50	*3.25 – 3.375
38-40 straw Furnace Oil	3.375– 3.50	3.375– 3.50	3.125– 3.25
32-36 dark gas oil	2.00 – 2.125	1.875– 2.00	1.75 – 1.875
32-36 dark zero gas oil	3.00 – 3.125	2.875– 3.00	2.75 – 2.875
32-36 straw zero gas oil	*3.25	*3.125– 3.25	*2.875– 3.00
28-30 zero fuel oil (per bbl.)	*$0.95 –$1.00	*$0.90 –$0.95	*$0.90 –$0.95
28-30 fuel oil (per bbl.)	$0.775–$0.825	$0.75 –$0.80	$0.75 –$0.80
24-26 fuel oil (per bbl.)	$0.55 –$0.575	$0.525–$0.55	$0.525–$0.55
18-22 fuel oil (per bbl.)	$0.325–$0.375	$0.30 –$0.35	$0.275–$0.30
18-22 zero fuel oil (per bbl.)	$0.45 –$0.55	$0.40 –$0.50	$0.375–$0.475
14-16 fuel oil (per bbl.)	$0.30 –$0.325	$0.275–$0.30	$0.25 –$0.275

*Nominal.

Naphtha and Solvent

(Prices are in cents per gallon, in tank car lots, as quoted by Chicago sellers)

	Nov. 7		Oct. 31	
	F.O.B. Group 3 Basis	F.O.B. Chicago District	F.O.B. Group 3 Basis	F.O.B. Chicago District
Stoddard Solvent	5.75 – 6.00	7.00 – 9.00	5.75 – 6.00	7.00 – 9.00
V.M. & P. Naphtha	6.00 – 6.25	7.50 – 8.50	6.00 – 6.25	7.50 – 8.50
Cleaners Naphtha	6.25 – 6.50	9.00	6.25 – 6.50	9.00
Oleum Spirits	5.00 – 5.25	6.00 – 7.00	5.00 – 5.25	6.00 – 7.00
Rubber Solvent	6.00 – 6.25	10.00	6.00 – 6.25	10.00
Lacquer Diluent	7.75 – 8.00	12.50	7.75 – 8.00	12.50

bers, and three or four plants found themselves in need of instructions to prevent piling up material. They started offering at price concessions of 0.125 cent, particularly in Texas, and before the week ended the general level was down to 3 cents in Oklahoma and 2.875 to 3 cents in Texas.

Business was reported slightly improved at the lower price levels. Most manufacturers took an optimistic view of the general situation and said that the market was in fair shape and that they didn't look for a continuance of lower prices, especially if the Texas crude oil situation was settled and refined gasoline buying improved.

Jobber buying of natural gasoline for blending purposes was reported light this week, as prices are still at a point where this is not particularly profitable. Most of them apparently either were using an 11 pound vapor pressure natural which would not require blending, or had gone back to refined gasolines again.

The kerosine situation showed but little change during the week. Buying generally was reported sluggish, although prices remained unchanged in most quarters. Traders generally continued to ask 3.625 to 3.75 cents for 41-43 w.w. kerosine in Oklahoma, while one or two who had moved their price up to 3.875 cents dropped it to 3.75 cents.

Demand for furnace oils was light all week and material was offered more freely than for some time past. Distributors evidently had their storage well filled and were not in the market due to lack of cold weather. Prices were not reduced, according to most traders, as refiners storage was reported to be in good shape and they were able to hold their goods for a while.

No material change was apparent in the market for gas and fuel oils, but traders said they were in good shape as to stocks and were making no great effort to push sales at present. Several grades of zero oils remained almost unobtainable for prompt shipment.

Globe Sales Offices Will Be Moved to Wichita

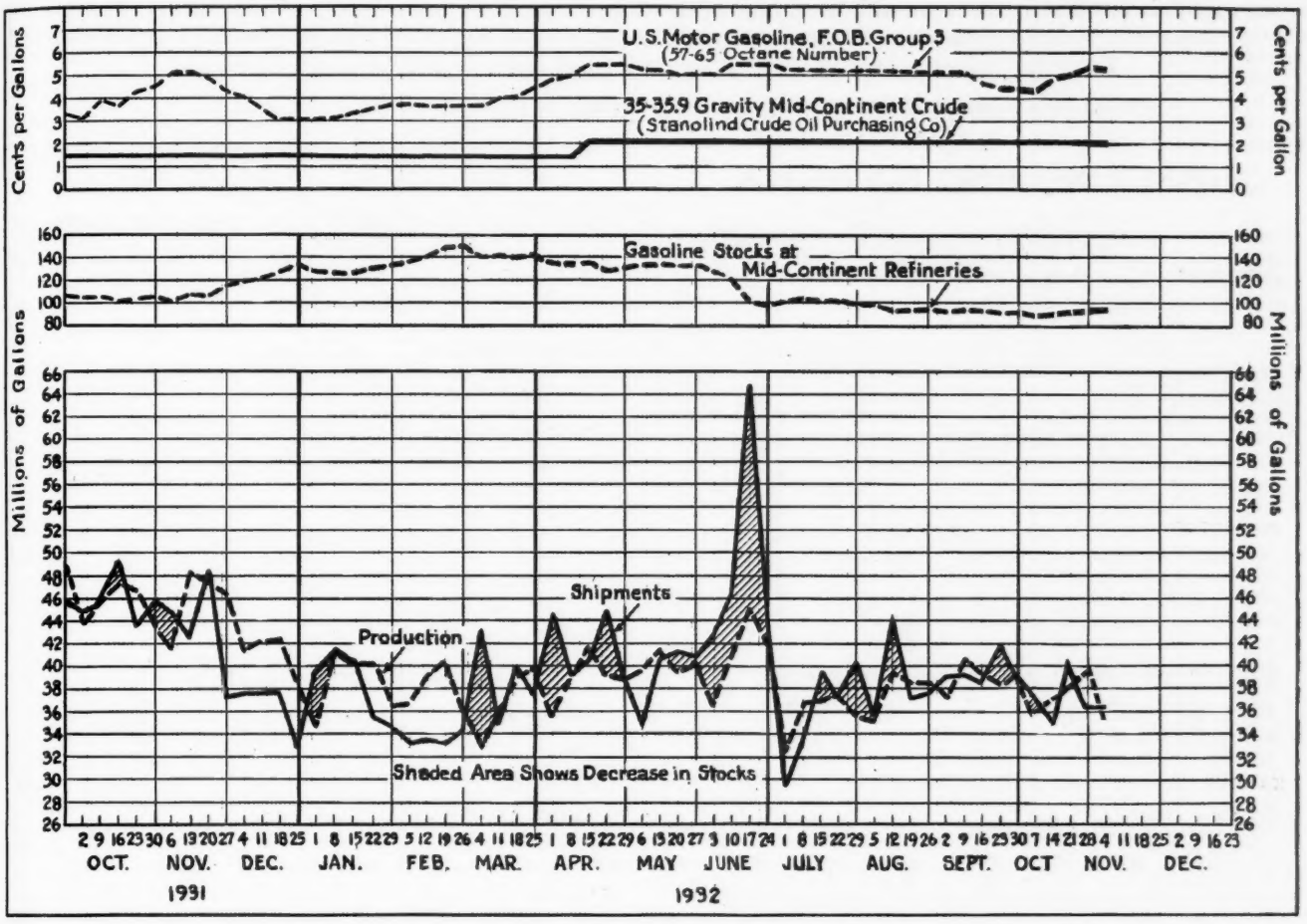
TULSA—General sales offices of the Globe Oil & Refining Co. will be moved from Tulsa to Wichita about Dec. 1, A. E. Landsittel, general sales manager announces.

Brown L. Meece, assistant sales manager for Producers & Refiners Corp., will join the Globe organization in the same capacity. B. F. Graham, of Kearney, Neb., has been made Nebraska representative and John T. Kerin, Wichita, will represent the company in Kansas. The Missouri territory will be under the direction of E. F. Painter, Springfield.

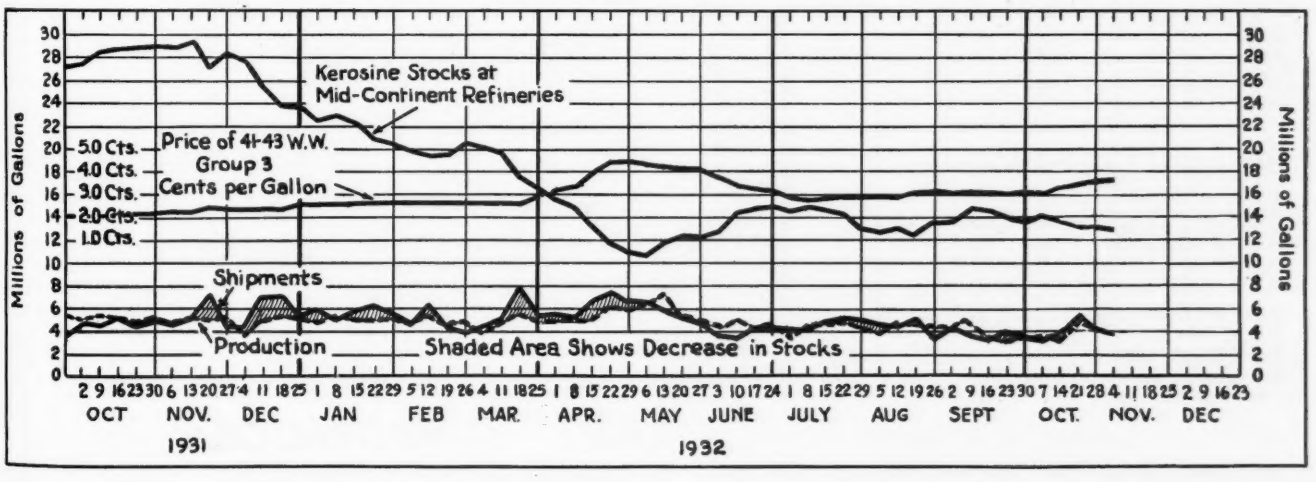
The new refinery of Globe, at McPherson, Kans., will be ready to start operations about Feb. 1. It is of 10,000-barrel capacity and will be equipped with modern cracking and reforming units. The company also operates refineries at Blackwell, Okla. and Lemont, Ill.

Barometer of Mid-Continent Refinery Market—Week Ending Nov. 4

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, from Reports Made by 76 Plants to National Petroleum News



Prices shown above are extended to date shown in Refinery Market and Crude tables in Market section of this issue and stocks, shipments and Production are extended to date as shown in the table on page 42



H. M. Edinger Resigns as Barnsdall Official

TULSA, Nov. 7.—Harry M. Edinger, vice-president of Barnsdall Refineries Inc., refining subsidiary of the Barnsdall Corp., resigned effective Nov. 1 as a result of ill health. Mr. Edinger has been with the company a number of years. He came into the sales end of the business from the accounting department.

George D. Locke, also a vice-president of the company, will assume the duties formerly discharged by Mr. Edinger. He will divide his time between Chicago, his home, and Tulsa.

Asphalt Recommendations Reaffirmed

WASHINGTON, Nov. 7.—A recent survey by the Bureau of Standards has shown that 96 per cent of the asphalt produced by 16 companies conforms to penetrations recommended in Simplified Practice Recommendation No. 4 (first revision). The recommendation therefore has been reaffirmed.

Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, except where $ is shown in tank car lots, f.o.b. Refinery. They represent prices made only to domestic jobbers who resell to the consuming public, except where otherwise noted. Tank car prices do not include state or federal taxes levied on some products.

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

GASOLINE AND NAPHTHA

	Prices Nov. 7	Prices Oct. 31	Prices Oct. 24
OKLAHOMA (F. o. b. Oklahoma refineries)			
50-52 450 e.p. naphtha...	4.625	4.625	4.50 – 4.625
U. S. Motor Gasoline			
Below 57 octane number	4.625– 4.75	4.75	4.75
57-65 octane number...	5.00 – 5.25	5.25	5.25
Above 65 octane number	5.375– 5.50	5.50	5.50
60-62, 400 E.P. Gasoline..			
Below 57 octane number	4.75	4.75 – 4.875	4.75
57-65 octane number...	5.125– 5.25	5.25 – 5.375	5.25
Above 65 octane number	5.375– 5.50	5.50 – 5.625	5.50 – 5.625
64-66, 375 E.P. Gasoline..	5.00	5.00 – 5.125	5.00 – 5.125
68-70 350-360 e.p. gasoline	5.125	5.125– 5.25	5.125– 5.25
Aviation Gasoline, below 73 Octane number	5.50	5.50	5.25 – 5.50
PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)			
52-54 Naphtha.....	6.125– 6.375	6.125– 6.375	6.00 – 6.25
54-56 Naphtha.....	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
U. S. Motor (58-62)	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
64-66 390 e.p. gasoline...	6.50 – 6.75	6.50 – 6.75	6.50 – 6.75
68-70 350-360 e.p.....	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00
OHIO (Quotations of S. O. Ohio. Delivered any point in Ohio.)			
U. S. Motor Gasoline....	7.925	7.875	7.875
60-65 Octane number....	8.30	8.25	8.25
Above 65 Octane number	8.55	8.50	8.50
KANSAS (F. o. b. refinery, Kansas destination)			
U. S. Motor Gasoline			
Below 57 octane number	4.75 – 5.00	4.875– 5.00	4.75 – 4.875
57-65 octane number...	5.25 – 5.50	5.375– 5.50	5.25 – 5.50
Above 65 octane number	5.50 – 5.75	5.625– 5.75	5.50 – 5.625
60-62 400 e.p. gasoline....	4.875– 5.125	5.00 – 5.125	4.875– 5.00
64-66 375 e.p. gasoline....	5.125– 5.375	5.25 – 5.375	5.125– 5.25
NORTH TEXAS (F. o. b. Wichita Falls district refineries)			
U. S. Motor Gasoline			
Below 57 octane number	4.50 – 4.625	4.75	4.75
57-65 octane number..	4.875– 5.125	5.125– 5.25	5.125– 5.25
Above 65 octane number	5.125– 5.25	5.375– 5.50	5.375– 5.50
60-62 400 e.p. gasoline...	4.625– 4.75	4.75 – 4.875	4.75
64-66 390 e.p. gasoline....	4.75 – 4.875	4.875– 5.00	4.75 – 4.875
64-66 375 e.p. gasoline....	4.75 – 4.875	4.875– 5.00	4.75 – 4.875
68-70 350-360 e.p. gasoline	4.875– 5.00	5.00 – 5.125	5.00 – 5.125
WEST TEXAS (F. o. b. West Texas refinery)			
U. S. Motor Gasoline			
Below 57 Octane number	4.625	4.75	4.75
57-65 Octane number..	5.00 – 5.125	5.125– 5.25	5.125– 5.25
Above 65 Octane number	5.25 – 5.375	5.375– 5.50	5.375– 5.50
NORTH LOUISIANA (La., Ark. and Miss. destination)			
U. S. Motor Gasoline			
Below 57 Octane number	4.875– 5.00	5.00	5.00
57-65 Octane number..	5.25 – 5.375	5.375	5.375
Above 65 Octane number	5.50 – 5.625	5.625	5.625
ARKANSAS (Ark., La., and Miss. destination)			
U. S. Motor Gasoline			
Below 57 Octane number	4.875– 5.00	5.00	5.00
57-65 Octane number...	5.25 – 5.375	5.375	5.375
Above 65 Octane number	5.50 – 5.625	5.625	5.625
CALIFORNIA (3c tax to be added to California gasoline prices if used in state.)			
54-58 U.S. Motor 437 e.p.	6.75 – 8.50	7.00 – 8.50	6.00 – 8.00
54-58 U.S. Motor, for outside state shipment....	5.75 – 7.00	5.75 – 6.75	5.75 – 7.00
42-45 Engine Distillate 445-480 e.p.....	7.00 – 8.00	7.00 – 8.00	7.00 – 8.00

†Prices Nominal. ††Only one refiner Quoting. *Quotations only.

NATURAL GASOLINE

	Prices Nov. 7	Prices Oct. 31	Prices Oct. 24
OKLAHOMA (F. o. b. Group 3)			
Grade 26-70.....	2.875 – 3.00	3.25	3.25
NORTH TEXAS (F. o. b. Breckenridge)			
Grade 26-70.....	2.75	3.25	3.25
CALIFORNIA (F. o. b. California refineries)			
75-85, 375-390 e.p. for blending.....	5.25 – 6.00	5.25 – 6.00	5.00 – 5.75

BURNING OILS

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)			
45 w.w. kerosine.....	4.375– 4.625	4.50 – 4.75	4.50 – 4.75
46 w.w. kerosine.....	4.625– 4.875	4.625– 4.875	4.625– 4.875
47 w.w. kerosine.....	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
OKLAHOMA (F. o. b. Oklahoma refineries)			
41-43 w.w. kerosine.....	3.50 – 3.75	3.625– 3.75	3.50 – 3.625
42-44 w.w. kerosine.....	3.625– 3.875	3.75 – 3.875	3.625– 3.75
KANSAS (F. o. b. refinery Kansas destination)			
41-43 w.w. kerosine.....	3.75 – 3.875	3.75 – 3.875	3.625– 3.75
42-44 w.w. kerosine.....	3.875– 4.00	3.875– 4.00	3.75 – 3.875
NORTH TEXAS (F. o. b. Wichita Falls district refineries)			
41-43 w.w. kerosine.....	3.50 – 3.625	3.625– 3.75	3.50
NORTH LOUISIANA (La., Ark. and Miss. destination)			
41-43 w.w. kerosine.....	4.00	4.00	4.00
ARKANSAS (Ark., La. and Miss. destination)			
41-43 w.w. kerosine.....	4.00	4.00	4.00
CALIFORNIA (F. o. b. California refineries)			
38-40 w.w. kerosine.....	4.00 – 5.00	4.00 – 5.00	4.00 – 4.75

NEUTRAL OIL

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

Vis.	Viscous Neutrals (Viscosity at 70° F.)		
200 No. 3 color, 420-425 flash:			
Zero pour test.....	18.00 –20.00	18.00 –20.00	18.00 –20.00
10 pour test.....	18.00 –19.00	18.00 –19.00	18.00 –19.00
15 pour test.....	16.00 –17.00	16.50 –17.00	16.50 –17.00
25 pour test.....	13.50 –15.00	14.50 –15.00	14.75 –15.25
180 No. 3 color, 410-415 flash:			
25 pour test.....	12.00 –13.00	12.50 –13.00	12.50 –13.00
150 No. 3 color, 400-405 flash:			
Zero pour test.....	11.50 –13.00	12.00 –14.00	12.00 –14.00
10 pour test.....	11.00 –12.00	12.00 –13.00	12.00 –13.00
15 pour test.....	10.00 –11.00	10.00 –11.00	10.00 –11.00
25 pour test.....	9.00 – 9.50	9.00 –10.00	9.50 –10.00

Refinery Markets Wax, Lubricants, Heavy Oil

Prices given below are in cents per gallon, except where $ is shown in tank car lots, f.o.b. Refinery. They represent prices made only to domestic jobbers who resell to the consuming public, except where otherwise noted. Tank car prices do not include state or federal taxes levied on some products.

(For quick reference to Refinery Prices, get the OIL PRICE HANDBOOK, published annually)

****MID-CONTINENT** (F. o. b. Mid-Continent refineries)

Vis.	Color	Prices Nov. 7 (Viscosity at 100° F.) 0 to 10 Pour Point	15 to 30 Pour Point	Prices Oct. 31 (Viscosity at 100° F.) 0 to 10 Pour Point	15 to 30 Pour Point
100	No. 2	4.50	4.00 – 4.25	4.50	4.00 – 4.25
150	No. 3	6.50	6.25	6.50	6.25
150	No. 4	6.00 – 6.25	5.75 – 6.00	6.00 – 6.25	5.75 – 6.00
180	No. 3	7.75	7.25 – 7.50	7.75	7.25 – 7.50
180	No. 4	7.25 – 7.50	7.00 – 7.25	7.25 – 7.50	7.00 – 7.25
180	No. 5	7.00 – 7.25	6.75 – 7.00	7.00 – 7.25	6.75 – 7.00
200	No. 3	8.50	7.50 – 8.00	8.50	7.50 – 8.00
200	No. 4	8.25	7.50 – 7.75	8.25	7.50 – 7.75
200	No. 5	7.75	7.25	7.75	7.25
220	No. 3	9.00 – 9.50	9.00	9.00 – 9.50	9.00
220	No. 4	9.00 – 9.25	8.50 – 8.75	9.00 – 9.25	8.50 – 8.75
220	No. 5	8.75 – 9.00	8.50	8.75 – 9.00	8.50
240	No. 3	10.00 –10.50	9.50	10.00 –10.50	9.50
240	No. 4	9.50 – 9.75	9.00 – 9.25	9.50 – 9.75	9.00 – 9.25
240	No. 5	9.50	9.00	9.50	9.00
280	No. 3	11.50 –11.75	10.75 –11.00	11.50 –11.75	10.75 –11.00
280	No. 4	10.50 –11.00	10.00 –10.50	10.50 –11.00	10.00 –10.50
280	No. 5	10.75	10.25	10.75	10.25

SOUTH TEXAS (F. o. b. South Texas refineries)

Vis.	Color	Prices Nov. 7 (Viscosity at 100° F., pour test 0)	Prices Oct. 31	Prices Oct. 24
200	No. 3 Pale	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
300	No. 3 Pale	6.50 – 7.25	6.50 – 7.25	6.50 – 7.25
500	No. 3½ Pale	7.50 – 8.00	7.50 – 8.00	7.50 – 8.00
750	No. 4 Pale	8.00 – 9.00	8.00 – 9.00	8.00 – 9.00
1200	No. 4 Pale	9.00 –10.00	9.00 –10.00	9.00 –10.00
200	No. 5½ Red Oil	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75
300	No. 5½ Red Oil	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
500	No. 6 Red Oil	7.00 – 7.50	7.00 – 7.50	7.00 – 7.50
750	No. 6 Red Oil	7.50 – 8.50	7.50 – 8.50	7.50 – 8.50
1200	No. 5-6 Red Oil	8.50 – 9.50	8.50 – 9.50	8.50 – 9.50

Note: Red oil prices shown above cover oils with blue cast; one or two refiners ask 0.5c to 1c per gallon higher for green cast red oils.

CALIFORNIA (F. o. b. California refineries)

Vis.	Color	(Viscosity at 100° F.)		
100	No. 3	8.50	8.50	8.50
200	No. 3	11.00	11.00	11.00
300	No. 3	11.50	11.50	11.50
450	No. 3	12.25	12.25	12.25
500	No. 3	12.50	12.50	12.50
550	No. 3	12.75	12.75	12.75
600	No. 3	12.75	12.75	12.75
200	No. 5	10.50	10.50	10.50
300	No. 5	11.00	11.00	11.00
400	No. 5	11.50	11.50	11.50
500	No. 5	12.00	12.00	12.00
600	No. 5	12.25	12.25	12.25
700	No. 7	12.50	12.50	12.50
800	No. 7	12.50	12.50	12.50

CYLINDER STOCKS

MID-CONTINENT (F. o. b. Mid-Continent refineries)

(Prices represent quotations and sales).

190-200 Vis. D at 210° Brt. St.	17.50	19.00	19.00
150-160 Vis. D at 210° Brt. St.:			
0-10 cold test	15.50	17.00	17.00
10-25 cold test	15.00	16.50	16.50
25-40 cold test	14.50	16.00	16.00
150-160 Vis. E 210° Brt. St.	14.50	16.00	16.00
600 St. Ref. Olive Green	4.00 – 5.50	4.00 – 5.50	4.00 – 5.50
600 St. Ref. Dark Green	3.50 – 4.50	3.50 – 4.50	3.50 – 4.50
Black Oil	2.25 – 2.50	2.25 – 2.50	2.125– 2.50

PENNSYLVANIA (F. o. b. Western Penn. refineries) (A.S.T.M. Tests)

600 Steam Refined, filterable	9.50 –10.50	10.00 –11.00	‡10.50 –11.00
650 Steam Refined	12.00 –13.00	12.50 –13.00	13.00 –13.50
600 Flash	13.00 –14.00	13.50 –14.00	14.00 –14.50
630 Flash	18.50 –19.00	19.00 –19.50	19.00 –19.50
600 Warren E	14.00 –14.50	14.00 –14.50	14.50 –15.00
Bright Stock, No. 8 color, 140-150 vis. at 210°, 540-550 flash:			
10 pour test	21.00 –23.00	22.50 –24.50	23.00 –25.00
15 pour test	20.00 –21.00	21.00 –22.00	21.00 –22.00
25 pour test	18.00 –19.00	19.00 –20.00	20.00 –21.00

‡‡Only one refiner quoting. †Prices Nominal.

WAX

PENNSYLVANIA (Per pound, F. o. b. New York)

	Prices Nov. 7	Prices Oct. 31	Prices Oct. 24
122-124 white crude scale a.m.p.	2.125	2.125	2.05 – 2.125
124-126 white crude scale, a.m.p.	2.125– 2.25	2.125– 2.25	2.125

****OKLAHOMA** (Per pound in barrels; in a few instances, per pound in burlap bags; F. o. b. Oklahoma refineries.)

124-126 White Crude Scale, a.m.p.	1.75 – 2.00	1.75 – 2.00	1.75 – 1.875

GAS AND FUEL OIL

PENNSYLVANIA (For outside Pittsburgh district)

36-40 fuel oil	3.25 – 3.50	3.375– 3.50	3.375– 3.50

OKLAHOMA (F. o. b. Oklahoma refineries)

38-40 straw Furnace Oil	3.375	3.375– 3.50	3.25 – 3.375
36-38 straw Furnace Oil	3.25	3.25 – 3.375	3.125– 3.25
32-36 straw gas oil	2.125– 2.25	2.125– 2.25	2.125
32-36 straw gas oil zero	3.125– 3.25	3.125– 3.25	3.00 – 3.125
32-36 dark gas oil	2.125	2.125	2.00 – 2.125
32-36 dark gas oil zero	3.00 – 3.125	3.00 – 3.125	3.00
28-30 fuel oil,zero(perbbl.)	†$0.95 –$1.00	†$0.95 –$0.975	†$0.90 –$0.95
28-30 fuel oil (per bbl.)	†$0.775–$0.825	†$0.75 –$0.775	†$0.75 –$0.775
26-28 fuel oil (per bbl.)	$0.575–$0.60	$0.55 –$0.575	$0.55 –$0.575
24-26 fuel oil (per bbl.)	$0.55 –$0.575	$0.50 –$0.525	$0.50 –$0.525
22-26 fuel oil (per bbl.)	$0.525–$0.55	$0.475–$0.50	$0.475–$0.50
18-22 fuel oil (per bbl.)	$0.45 –$0.475	$0.425–$0.475	$0.425–$0.475
16-20 fuel oil (per bbl.)	$0.40 –$0.425	$0.40 –$0.425	$0.40 –$0.425
14-16 fuel oil (per bbl.)	†$0.40	†$0.40	†$0.40

KANSAS (F. o. b. refinery Kansas destination)

38-40 straw Furnace Oil	3.50 – 3.625	3.50 – 3.625	3.375– 3.50
36-38 straw Furnace Oil	3.375– 3.50	3.375– 3.50	3.25 – 3.375
32-36 straw gas oil	†3.00 – 3.125	†3.00 – 3.125	†3.00
18-22 fuel oil (per bbl.)	$0.475–$0.525	$0.475–$0.525	$0.475–$0.525
10-14 fuel oil (per bbl.)	$0.40 –$0.425	$0.40 –$0.425	$0.40 –$0.425

NORTH TEXAS (F. o. b. Wichita Falls district refineries)

38-40 straw Furnace Oil	3.375	3.375– 3.50	3.25 – 3.375
38-40 prime white Furnace Oil	3.50 – 3.625	3.50 – 3.625	3.375
32-36 gas oil, cracked	3.00 – 3.125	3.00 – 3.125	2.875– 3.00
32-36 St. reduced gas oil	1.625– 1.75	1.75	1.75
24-26 fuel oil (per bbl.)	$0.50 –$0.525	$0.50 –$0.525	$0.50 –$0.525
20-24 fuel oil (per bbl.)	$0.475–$0.50	$0.475–$0.50	$0.45 –$0.475
18-22 fuel oil (per bbl.)	$0.425–$0.45	$0.425–$0.45	$0.425–$0.45

WEST TEXAS (F. o. b. West Texas refinery)

30-32 gas oil	2.875– 3.00	2.875	2.75 – 2.875
28-30 gas oil, zero	2.875– 3.00	2.875	2.75 – 2.875
18-22 fuel oil (per bbl.)	$0.50	**$0.50	$0.35 –$0.45

NORTH LOUISIANA (La., Ark. and Miss. destination)

32-36 gas oil	2.75	2.75	2.75
32-36 gas oil, zero	3.25	3.125– 3.25	3.125– 3.25
14-16 fuel oil (per bbl.)	$0.375–$0.40	$0.375–$0.40	$0.375–$0.40

ARKANSAS (Ark., La., and Miss. destination)

32-36 gas oil	2.75 – 2.875	2.75 – 2.875	2.75 – 2.875
32-36 gas oil, zero	3.25	3.25	3.25
28-30 gas oil, zero	3.00	3.00	3.00
20-24 fuel oil (per bbl.)	$0.45 –$0.475	$0.45 –$0.475	$0.45 –$0.475
9-12 fuel oil (per bbl.)	$0.375–$0.40	$0.375–$0.40	$0.375–$0.40

CALIFORNIA (F. o. b. refinery)

14-18 fuel oil (per bbl.)	$0.45 –$0.55	$0.45 –$0.55	$0.45 –$0.55
14-18 Bunker oil (per bbl.)	$0.54 –$0.70	$0.55 –$0.75	$0.55 –$0.75
30-34 gas oil (per bbl.)	$0.78 –$0.90	$0.80 –$0.95	$0.80 –$0.95
27 Plus Diesel oil (per bbl.)	$0.78 –$0.90	$0.80 –$0.95	$0.80 –$0.95

PETROLATUMS

PENNSYLVANIA (Per pound, in barrels, carload lots, f. o. b. Penna. refinery. In tank cars ½c to ¾c per pound less.) Quotations are from majority of refiners.

Snow White	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
Lily White	5.00 – 5.50	5.00 – 5.50	5.00 – 5.50
Cream White	4.125– 4.50	4.125– 4.50	4.125– 4.50
Light Amber	2.25 – 2.50	2.25 – 2.50	2.25 – 2.50
Amber	2.00 – 2.25	2.00 – 2.25	2.00 – 2.25
Red	1.875– 2.00	1.875– 2.00	1.875– 2.00

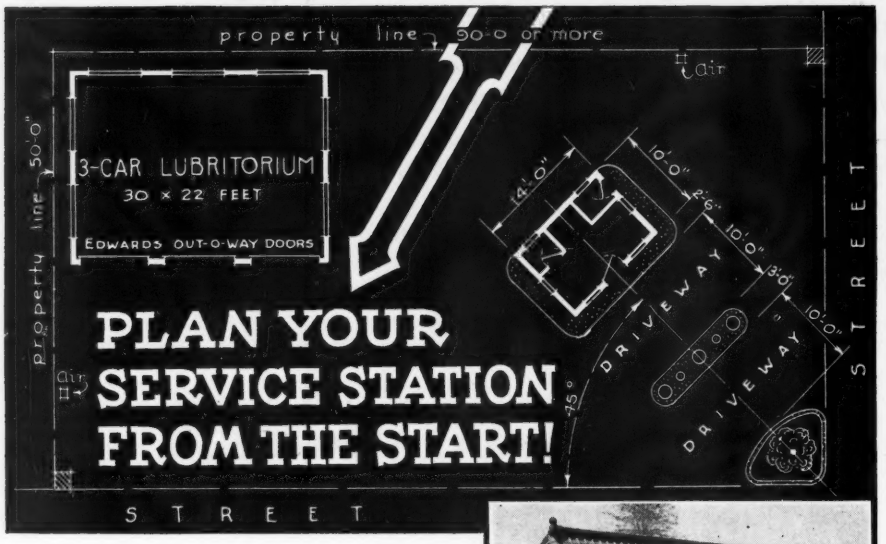
PETROLEUM COKE

****OKLAHOMA** (F. o. b. Oklahoma refineries)
(Per ton in car lots)

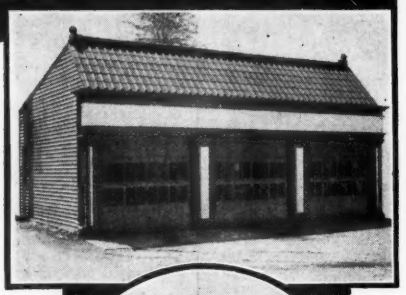
Lump	$3.00 –$4.00	$3.00 –$4.00	$3.00 –$4.00
Still run	$2.00	$2.00	$2.00
Breeze	$0.75 –$1.00	$0.75 –$1.00	$0.75 –$1.00

***Quotations only. **Prices represent quotations and sales.**

Let EDWARDS



PLAN YOUR SERVICE STATION FROM THE START!



OFTEN the success or failure of the new service station hinges on the angle of the drive, the distance from the street, the placing of pumps, etc.

Edwards buildings and lot layouts are the result of thirty years scientific study . . . each one is planned right from the start to pay profits. Edwards Buildings are models of efficiency, beauty, with refinements that make future expansion economical and simple. The English model and three car lubritorium shown here is but an example of the many Edwards Buildings available for prompt delivery. Edwards Filling Stations, Lubritoriums, Parking Lot Offices, etc., are easy to erect, economical to buy and profitable to operate. Leaders in the industry have standardized on them for their sound practical values.

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National Petroleum News
1213 W. 3rd Street Cleveland, Ohio

New Refining Patents

Pressure Cracking. U. S. P. 1 868 901, July 26, 1932, Application filed April 4, 1930; Eugene C. Herthel, assignor to Sinclair Refining Co.

AN IMPROVED heating method for raising heavy oils to a cracking temperature and maintaining them there utilizes both sensible heat of hot gases and the radiant heat of the combustion chamber, in a novel manner. The heating chamber of the cracking furnace is separated from the combustion chamber by a low bridge-wall. Radiant heat can pass directly over the bridge-wall to the heating chamber; but the arrangement is such that the combustion gases must pass upwardly along the bridge-wall for some distance and enter the heating chamber near its top.

Thus the radiant heat has a short path, and the sensible heat of the hot gases a relatively longer path so that flame impingement on the tubes in the heating chamber is avoided. The heating gases are recirculated to improve the absorption of sensible heat. As another advantage this recirculation, like the means for preventing flame impingement, serves to prevent local overheating of the oil.

What is Claimed

In heating oils to cracking temperatures, burning fuel in a combustion chamber, transmitting the radiant heat directly to a heating chamber, passing the hot combustion gases also to the heating chamber but along a longer path so that flame impingement on the heating tubes is avoided, this being effected by means of a stream of recirculated heating gases, and circulating oil through tubes in the heating chamber to heat the oil to a cracking temperature both by sensible heat absorbed from the hot gases from the combustion chamber and by radiant heat transmitted directly from the combustion chamber.

* * *

Distilling Oils. U. S. P. 1 872 908, Aug. 23, 1932, application filed Jan. 23, 1923; Henry L. Doherty, assignor to Doherty Research Co.

PRESSURE distillation of hydrocarbon oils is known, but as commonly applied it is used for cracking the oil and obtaining as much as possible of one fraction, such as gasoline. Separation of oils into different fractions is generally carried out under atmospheric pressure or less. But a process has now been developed whereby fractional distillation is efficiently carried out under pressure, without cracking the oil. The separation of successive cuts is clean and sharp; heat economy is promoted by using heat of vaporization to preheat the charging stock; and the various temperature cuts are effectively controlled to produce desired fractions, e.g. for

topping a crude to produce light ends for blending gasolines.

The essence of the process lies in raising the preheated charging stock, under pressure, to a temperature at which vapors will distil from the oil when the pressure is released, and then releasing the pressure in controlled stages by passing the oil through valves into expansion chambers. The vapors from the expansion chambers are cooled in condensers which serve as preheaters for the charging stock, on a counter-current plan which minimizes thermal losses. Remarkably efficient separation of fractions is attained by the new process.

What is Claimed

Passing oil under pressure through heat exchange stages at increasing temperatures, then through a second series of heat exchange stages with respect to vapors under increasing pressures, then heating the oil to a distilling temperature, releasing the pressure in stages in which the vapors traverse the second heat exchange series, then passing the condensed vapors through the first heat exchange series.

* * *

Distilling Oil. U. S. P. 1 871 148, Aug. 9, 1932, application filed June 8, 1925; Oswald C. Brewster, assignor to Standard Oil Co. of Indiana.

THIS invention relates to an improved system of fractional distillation, in which the feed stock is preheated by contact with vapors from a still, rising through a tower. The heavier fractions in the vapor condense, and are returned with the preheated feed stock to the still. A number of stills may be used, according to the final products wanted; for example, to obtain light naphtha, heavy naphtha, kerosine, gas oil and wax-bearing tar bottoms, three stills are used in the new system. For a larger number of products, more stills may be used, or fewer stills for fewer products.

The major advantages of the system are that much less vaporization is required in the still than is required in prior processes of the continuous type; and that the reflux ratios in the fractionators are much lower than those prevailing in prior practice. This permits use of smaller less expensive towers for a given capacity of output, or greatly increases the output of a tower of given size.

What is Claimed

In oil distilling apparatus, a still with vapor connection to a fractionating tower, a reflux collector at an intermediate point in the tower and means for returning the reflux to the still, a second still with vapor to a second fractionating tower at the bottom of the tower, means for supplying residuum from the first still to the second still, and means for supplying reflux from the first tower to the top of the second tower.

For Fall and Winter Use

Outside dimensions 58½" high, 28⅜" wide, weight 25 Lbs.
Take sign insert 28" x 44"
Black enamel finish—baked on
Patent No. 1,505,046
"Inner frame is now gripped, and snaps in on all four sides—a recent improvement"

MID-WEST

QUICK CHANGE SIGN STAND

Call Attention to:

"Change Grease"
"Change Oil"
"Attend to Battery"
"Anti-Freeze"
"Look to Tires"
"Gasoline prices"
"Special high grade Winter Gasoline"

Each side may have a different message

• • •

Card board generally used but 20 gauge galvanized steel plate furnished for 75c extra.

Shipped knocked down and bundled.

Two anchor rods ⅜" x 15" with a 2" head supplied with each stand—no extra charge.

Samples for $2.00—Special prices in quantities. Send for descriptive circular.

SIGN DEPARTMENT

MID-WEST FORGING CO.

38 S. Dearborn St. **Chicago, Illinois**

California Refinery Market

Domestic Prices Slightly Lower

LOS ANGELES, Nov. 5

IN COMPARISON with recent activity, Pacific coast domestic markets showed a hesitant tone the past week with prices on several commodities averaging slightly lower.

Export members of the trade reported an absolute lack of interest in California petroleum quotations by east coast buyers, and few expected this branch of the business to improve much before seasonal demand picks up next year.

Some inquiry for quotations on cargo lots of high octane gasoline was received from Continental Europe, but buyers' ideas of prices were reported low and doubt was expressed that a deal could be closed. Nominal quotations on a 375 e.p. gasoline ranged from 4.5 to 4.75 cents, for export, or about the same range as at the Gulf.

Bids on 500,000 barrels of bunker C fuel oil for the Panama Canal needs during the coming year will be opened Nov. 7. Pacific coast refiners are particularly interested in a 200,000-barrel lot to be delivered at Balboa. The additional 300,000 barrels will go to Cristobal on the east side.

In domestic markets, tank-truck-and-trailer quotations on several independent gasolines were shaded to 6.75 to 7 cents, at the rack, exclusive of tax. This compares with 7.25 to 7.5 cents asked by the larger independents on "competitive" grades and with 7.9 cents on major third-grade brands.

Retail prices in the Los Angeles Basin ranged from 12.5 cents on the cheapest grades, to 13.5 cents on the better independent product, 13.9 cents on the third-grade, 14.5 cents on so-called "First Grade" gasolines, and 17.5 cents on the high octane brands.

Demand from buyers outside the state was fair with quotations on spot movement ranging from 5.75 to 7 cents, exclusive of tax. For delivery during November, quotations ranged from 6 cents up.

Apparently without reason, burning oil quotations were off slightly. Fuel oil for bunkering ranged from $0.54 to $0.60 per barrel, in the stream, and in tank cars at $0.45 to $0.55. Warm weather has delayed the demand for smudging oil and quotations on 27 plus diesel and 30-32 gas oil ranged from $0.78 to $0.90.

NEW STATIONS BUILDING

Note: Material used in this column is taken principally from newspapers. NATIONAL PETROLEUM NEWS assumes no responsibility for its accuracy. Headquarters of companies and addresses of individuals are given wherever possible.

The list as published from week to week cannot be looked upon as indicative of the relative extent to which stations are being built in various parts of the country.

Service Stations

Lincoln, Neb.—Phillips Petroleum Co., Bartlesville, Okla.

Mount Dora, Fla.—Seaboard Oil Co., 1730 Lynch Bldg., Jacksonville, Fla.

Davenport, Ia.—Louis J. Maley; Mrs. Hannah Schick; and Davenport Seed Co.

Deshler, O.—J. C. Liechty.

Dubuque, Ia.—John Hacke, 2708 Elm St.

Estherville, Ia.—Johnson Oil Station.

St. Paul, Minn.—Jesmer Bros., Inc., 326 Minnesota Bldg.

Waterloo, Ia.—Mid-Continent Petroleum Corp., Tulsa, Okla.

Decorah, Ia.—Standard Oil Co. of Indiana, 910 S. Michigan Ave., Chicago, Ill.

Sioux City, Ia.—J. P. Newton, 113 S. Prospect St.

Sioux City, Ia.—Wallace Garage, Leeds, Ia.

Minneapolis, Minn.—Sears, Roebuck & Co., c/o Joseph C. Langran, District Manager, Lake St. and Elliot Ave.

Kirksville, Mo.—Samples & Elsea.

Carrollton, Mo.—Lee Heston.

Danbury, Conn.—Frank J. DiNapoli.

Passaic, N. J.—Aarbo Service Station, 72 Broadway.

Marquette, Mich.—Northern Oil Co., Virginia, Minn.

Black River Falls, Wis.—Munderlow & Son, Alma Center.

Michigan City, Ind.—Frank D. White.

Butler, Ind.—Carl Oberlin.

Oxford, O.—Lester Carmin.

St. Paul, Minn.—Joseph Bernstein.

Stevens Point, Wis.—Carl R. Rogers.

Marysville, O.—Hickock Oil Corp., Toledo, O.

Wisconsin Rapids, Wis. — Frank Cwicklo, Rural Delivery.

Montpelier, Ind.—Max Plank.

Topeka, Kan.—Louis F. Secord.

Fort Smith, Ark.—Continental Oil Co., Ponca City, Okla.

Clinton, Ia.—Margaret Hand.

Marshalltown, Ia.—Harold B. Rosen.

Medford, Mass.—Dr. Andrew D. Guthrie; Henry Risman.

Holyoke, Mass.—M. E. Macintosh trustees.

Birmingham, Ala.—W. M. Leary.

Great Neck, N. Y.—Samuel Zeifman.

Union City, N. J.—Sears, Roebuck & Co.

Teaneck, N. J.—Sun Oil Co., 1608 Walnut St., Philadelphia, Pa.

Wayne, Pa.—Atlantic Refining Co., 260 S. Broad St., Philadelphia, Pa.

Meriden, Conn.—Dennis Cox.

Metuchen, N. J.—George A. Smith.

North Tonawanda, N. Y. — Delia Ehlers.

Audubon, Minn.—J. H. McAwrey.

Chippewa Falls, Wis.—Jack Sebelden.

Stevens Point, Wis.—Judd Chenevert, Brawley and Plover Sts.

Small Chance Seen to Get Refund on Iowa Taxes

CHICAGO, Nov. 5.—Oil companies will have little success in recovering money paid as gasoline taxes in Iowa despite the recent decision of a federal judge in South Dakota that the 1 cent additional tax imposed in 1927 was unconstitutional, in the opinion of tax attorneys who have investigated the situation the past week.

It was the opinion of these attorneys that the loose wording of the law in Iowa on which the federal judge based his opinion, would be corrected by the next legislature. It was pointed out that the Iowa law does not provide for such refunds without legislative action. It was believed the legislature not only would correct the wording of the law, but would refuse to make an appropriation of the magnitude such refunds would necessitate.

One or two suits for refunds have been filed and there is talk of other suits. The attorney general of Iowa, however, has been quoted as saying because he had worked with the oil companies to the best of his ability in an endeavor to prevent gasoline tax evasion that they would co-operate with him and the state further and not sue for refund of taxes on account of a technical loophole.

One of the major marketers in Iowa was understood to have advised the attorney general that it would endeavor to assist him and would not file suit unless a majority of other marketing companies in the state instituted suits.

Temperature Control

A handbook of Industrial Temperature and Humidity Measurement and Control has been published by the Instruments Publishing Co., Pittsburgh.

The book actually comprises four handbooks on these subjects: thermometry, pyrometry automatic control of temperature, and humidity measurement and control M. F. Behar is the author. The price is $4.00.

Pennsylvania Markets

Lubes Quiet At Lower Prices

CLEVELAND, Nov. 5.—Trading was relatively light in the western Pennsylvania market the first week in October. Motor fuel and burning oil prices were fairly steady and wax prices continued their recent advance. Lubricating oils, however, were soft and prices of cylinder stocks, bright stock and neutral oils were lower.

From some parts of the field there were reports that gasoline stocks were being added to slightly. Distress gasoline, however, was practically nil as a market factor. Refiners were unanimous in reporting a slowing down of movement but this factor was considered seasonal and caused but little concern.

U. S. Motor gasoline remained at a minimum of 6.25 cents. Buyers said their efforts to shade this price were unsuccessful. Naphthas were in good demand, particularly from industrial users, and prices of the ordinary grades of naphthas in some instances were bringing higher prices than prevailed for U. S. Motor gasoline.

Kerosine was offered more freely the past week but at the same time there was no easing of the price. Refinery stocks were in better shape than at this time last year and the opinion was general that a cold snap would stimulate demand sufficiently to prevent any break in the kerosine price.

The call for fuel oil from industrial users continued to be moderately active. It at least offset the curtailed demand for fuel oil for cracking. Prices were steady.

Wax remained scarce; it was practically unobtainable in Pennsylvania for prompt shipment. Several refiners reported they were sold up on wax for the remainder of the year.

Of the lubricating oils, cylinder stocks and bright stocks were hit the hardest. Prices of these oils were 0.5 to 1 cent a gallon lower. Neutral oils were quoted 0.25 to 0.5 cent a gallon lower with the exception of the low pour test grades. Increased demand for the low pour test grades was reported from some quarters, but on the whole lubricating oils remained in the doldrums.

Egloff to Speak

CHICAGO, Nov. 7.—Dr. Gustav Egloff of Universal Oil Products Co. will give an address at the Rice Institute, Houston, while there for the meeting of the American Petroleum Institute. Dr. Egloff's address will be given on the evening of Nov. 16 and the subject will be "Inhibitors and Their Action in Modern Cracked Gasoline."

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Neutrals — Long Residuums
Cylinder Stocks — Gasoline — Naphtha
Cleaning Solvents — Kerosene
Fuel Oil — Paraffine Waxes
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Eastern Domestic Markets

New England Gasoline Prices Higher

Staff Special

NEW YORK, Nov. 5

GASOLINE markets along the Atlantic seaboard were featureless during the week ended Nov. 5. No retail price advances were forthcoming. Tank car prices were generally unchanged with the exception of Boston where the market was slightly higher. Cargo prices continued unchanged in the domestic market, whereas export prices were reduced 0.125 to 0.25 cent.

The tank car market at New York was generally unchanged at 6.25 and 6.5 cents for the high and low octane grades, respectively. Buying was slow. It was stated that buyers of sizeable quantities would not be in the market again before Nov. 15 and that in the meantime the majority of purchases were being made by the smaller buyers. One or two barge transactions were reported early in the week at 5.75 cents for low octane and 6 cents for high octane gasoline. These prices were 0.5 cent under the tank car market. Some uneasiness was noted on the part of tank car suppliers, but no reductions in prices took place.

Philadelphia and Baltimore markets were not active. Some trading was reported at 6.25 cents, but generally speaking open market transactions were few and far between. Movements under contract were fairly heavy.

New England markets were steady. High octane gasoline was unchanged at 6.75 cents at Boston and Providence, while low octane gasoline was generally quoted 0.25 cent higher than it was a week ago. Further advances in the tank car markets were said to be held in check by the slowness of the retail markets to respond to the stability existing in the wholesale price structure.

Although no advances occurred in the kerosine market, suppliers indicated that demand was good and material was not plentiful. Heating oils were in demand in some localities and prices were steady. Bunker oil, Grade C, remained unchanged at $0.75 per barrel in the key markets. Diesel oil was unchanged at $1.65 per barrel at New York harbor.

The cargo market at the Gulf developed mixed trends. Domestic prices were unchanged while export prices were reduced. American suppliers dropped their prices 0.125 to 0.25 cent late in the week following the appearance of more intense competition on the part of Roumanian suppliers. The new schedule of minimum prices was as follows: U. S. Motor, 4 cents; 60-62, 400 end point, 4.125 cents; 61-63, 390 end point, 4.25 cents; and 64-66, 375 end point, 4.5 cents.

Spot sales in the market for cased goods were few with no changes noted in price schedules. It was reported that several companies were shipping gasoline and kerosine in cases on a consignment basis to the West Indies and South Africa.

Wax Markets

Prices Steady

NEW YORK, Nov. 5.—Trading in wax markets at New York and New Orleans was comparatively light during the week just ended. Prices in the New York market for scale waxes ranged from 1.875 cents on yellow crude scale to 2.125 cents per pound on white crude scale.

At New Orleans scale waxes were in better demand for export. Prices were steady and more nearly in line with the New York market. Demand for the fully refined grades was slow in both markets. Prices were generally unchanged.

Burning Oil Trade Brings New Faces into Industry

NEW YORK, Oct. 22.—Extension of the use of oil for heating and cooking in Atlantic Seaboard territory is bringing a new set-up in marketing burning oils and some new faces into the oil industry.

The new faces are mostly those of coal dealers who are striving to retain the heating business they have held for years: the trade that once bought coal but now buys oil. Some of these coal dealers have installed bulk storage facilities and are buying burning oils in tank car and barge lots. Others are buying only in tank wagon lots from refining companies' or jobbers' bulk plants. Other coal dealers have arrangements with oil companies under which they get a commission on all burning oils they sell although deliveries and collections are in the hands of the oil companies.

More oil companies seem to be getting into the burner business, some as sales agents but in the case of two or three large oil companies into the manufacture of burners by subsidiary companies. There have been conflicts between the strictly burner interests and the burner-burning oil interests.

At present along the Atlantic seaboard the wholesale price for No. 1 oil is 5 cents and No. 2 oil is 4 cents, f.o.b. refineries or bulk terminals. The retail prices vary from 8 to 8.5 cents for No. 1 and 6.5 to 6.75 cents for No. 2 oil depending upon the freight rate and competitive conditions. In some places the retail prices for No. 2 oil is 5.5 cents. In most of New England the dealers work on a 2-cent margin on No. 1 oil and a 1.5-cent margin on No. 2 oil.

Reenters Radio Advertising

CHICAGO, Nov. 5.—The Standard Oil Co. of Indiana will reenter the radio entertainment field Nov. 7 with a 15-minute program designated the Standard Oil Funfest. Twenty stations in 13 states will be used five days a week for eight weeks.

The Funfest will be in the first general entertainment enterprise by the company throughout its territory in more than two years. It recently completed its sponsorship of the Chicago Symphony in weekly concerts, and has backed limited broadcasts of football games.

Texas Marketers to Hold One Day Conference

HOUSTON, Nov. 5.—The Texas Petroleum Marketers Association is holding a one day meeting in Dallas, Texas, Nov. 10 for all marketers in the state. This conference is to discuss legislative affairs and other state marketing matters, and is being held in lieu of the association's annual convention.

Representatives of all types of marketing organizations in the state have been invited to attend, and it will be an open meeting for all marketing companies. It is likely that some state officials will be invited to listen to marketers discuss problems.

Major subjects to come up at the meeting pertain to marketers interests in the regular January session of the legislature on laws concerning gasoline adulteration and tax evasion.

Another important subject will be that of the aid marketers can give to the Texas school system.

L. H. Flynn, managing director of the association, has sent a circular to Texas marketers urging attendance at the conference, and to be prepared to express their opinion on subjects of interest to the industry.

On The Lazy Bench

Much Too Much

Too much oats and too much wheat,
Too much corn and too much heat,
Too much cotton, too much oil,
Too many hours that we don't toil.
Too many highways, too many cars,
Too many people behind the bars.
Too much poverty, too much wealth,
Too many people in ill health.
Too many politics, too much booze,
Too many wearing high heeled shoes.
Too many loafing, too many bets,
Too many failing to pay their debts.
Too many spending their dough on gas,
Too much taking of European sass.
Too many living beyond their means,
Too many buying canned corn and beans.
Too many sowing their crops of wild oats,
Too many candidates after votes.
Too many hiring their washing done,
Too many playing bridge for fun.
Too many people looking for Uncle Sam,
Too many people who don't give a damn.
Too many poets, too much prose,
Too many girls without underclothes.
Too much buying goods on time,
Too many people don't save a dime.
Too much ball, too much play,
Too many politicians on big pay.
Too many taxes, too much spent,
Too many folks spend every cent.
Too much fun, too much ease,
Too many rips in my B. V. D's.
Too much reform, too much law,
It's the darndest mess you ever saw.

Gusherville News (Vickers Petroleum Co.)

* * *

He Soon Learned

Wife (to husband who has returned from the first game of golf): "Well, dear, how did you get along with the royal and ancient game?"

"Oh, it was great fun, although I was all at sea at first. Do you know, when the pro told me to address the ball, I couldn't for the life of me think of a single word. But I soon learned all of them."

—Pure Oil News
The Pure Oil Co.

* * *

Gasoline Surprise

According to Art Boobson the country is all set t' have the greatest gasoline Surplus known in history.

Seems as though Art durin' his hangin' about Haskins fillin' station discovered many people was buyin' only 1 to 3 gals. at a time, plainly indicatin' they was all weanin' their cars.

Gusherville News (Vickers Petroleum Co.)

* * *

Two boys were talking about the accomplishments of their fathers, and little Billy said: "My father is an Eagle, an Elk, a Moose and a Lion." Mickey said, "What's it cost to see him?"

—Electrical News
Petroleum Industry Electrical Association

DAUGHERTY'S PENNSYLVANIA LOW COLD TEST OILS

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Other Salient Features of Exclusive Process:*

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2. "Oilier" Oil
3. Stronger Film at High Operating Temperatures
4. No Increase in Carbon Residue
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60/65 @ 210	Below O° F.
75/80 @ 210	Below O° F.

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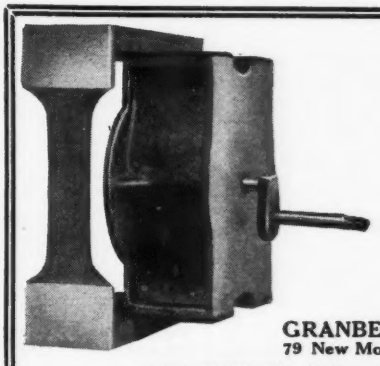

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HARMAN PACIFIC CO., 422 East Third St., Los Angeles, Calif.
PERFECTION ENGINEERING CO., 2110 Westlake Ave., Seattle, Wash.
NATIONAL PUMPS CORP., Dayton, Ohio, *Manufacturers of Granberg Meter Equipped Retail Pumps*

Complete Seaboard Markets

Prices on this page do not include federal tax levied on some products

Eastern Domestic Markets

(Prices for tank car lots, f. o. b. refinery or seaboard terminal, representing majority of sales and quotations to jobbers and/or consumers. Prices shown below do not include inspection tax levied in Florida and South Carolina.)

	Prices Nov. 7	Prices Oct. 31	Prices Oct. 24
U. S. MOTOR GASOLINE:			
Below 65 Octane Number			
New York harbor	6.25 – 6.50	6.25	6.00 – 6.25
Portland district	6.50 – 6.75	6.50 – 6.75	6.50 – 6.75
Boston district	6.25 – 6.50	6.00 – 6.25	6.00 – 6.25
Providence district	6.25 – 6.50	6.00 – 6.25	6.00 – 6.25
Philadelphia district	6.25	6.25	6.00 – 6.25
Baltimore district	6.25	6.25	6.00 – 6.25
Norfolk district	6.25	6.25	6.25
Charleston district	6.25	6.25	6.25
Savannah district	6.25	6.25	6.25
Jacksonville district	6.25	6.25	6.25
MOTOR GASOLINE:			
65 Octane Number and Above			
New York harbor	6.50 – 7.00	6.50 – 7.00	6.00 – 6.50
Portland district	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
Boston district	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00
Providence district	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00
Philadelphia district	6.50 – 7.00	6.50 – 7.00	6.00 – 6.50
Baltimore district	6.50 – 7.00	6.50 – 7.00	6.00 – 6.50
Norfolk district	7.00	7.00	7.00
Charleston district	7.00	7.00	7.00
Savannah district	7.00	7.00	7.00
Jacksonville district	7.00	7.00	7.00
AVIATION GASOLINE:			
Below 73 Octane Number			
New York harbor	8.50 – 9.50	8.50 – 9.50	8.50 – 9.50
Philadelphia	8.50 – 9.50	8.50 – 9.50	8.50 – 9.50
Baltimore	8.50 – 9.50	8.50 – 9.50	8.50 – 9.50
Boston	8.50 – 9.50	8.50 – 9.50	8.50 – 9.50
73 Octane Number and Above (Octane determination basis 300° F; 600 R.P.M.)			
New York harbor	11.00 –12.00	10.00 –11.00	10.00 –11.00
Philadelphia	11.00 –12.00	10.00 –11.00	10.00 –11.00
Baltimore	11.00 –12.00	10.00 –11.00	10.00 –11.00
Boston	11.00 –12.00	10.00 –11.00	10.00 –11.00
WATER WHITE KEROSINE			
New York harbor	5.50	5.50	5.50
Philadelphia district	5.50	5.50	5.50
Baltimore district	5.75	5.75	5.75
Boston district	5.50	5.25 – 5.50	5.25 – 5.50
BURNING OILS:			
New York harbor:			
Furnace oil No. 1	5.00	5.00	5.00
Heating oil No. 2	4.00	4.00	4.00
Distillate oil No. 3	4.00	4.00	4.00
Industrial oil No. 4	3.50	3.50	3.50
Philadelphia District:			
Furnace oil No. 1	5.00	5.00	5.00
Heating oil No. 2	4.00	4.00	4.00
Distillate oil No. 3	3.50 – 4.00	3.50 – 4.00	3.50 – 4.00
Boston district:			
Furnace oil No. 1	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
Heating oil No. 2	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25
Distillate oil No. 3	3.75 – 4.00	3.75 – 4.00	3.75 – 4.00
Industrial oil No. 4	3.50 – 4.00	3.50 – 4.00	3.50 – 4.00
GRADE C BUNKER OIL (Lighterage 5c per barrel additional)			
New York harbor	$0.75	$0.75	$0.75
Philadelphia district	$0.75	$0.75	$0.75
Boston district	$0.75	$0.75	$0.75
DIESEL OIL—AT NEW YORK HARBOR			
Ships' bunkers, per barrel	$1.65	$1.65	$1.65
Shore Plants, per gallon	4.00	4.00	4.00
GAS OIL: 28-34 Gravity			
New York harbor	4.00	4.00	4.00
Philadelphia district	4.00	4.00	4.00

New York Export Market

(Lubricating oils in cents per gal. in bbls. F. a. s. New York. Paraffin oil prices represent bulk shipment in tankers f. a. s. New York.)

CYLINDER OILS (Pennsylvania Products)			
Bright stock, No. 8 color	24.00 –26.00	23.00 –26.00	24.00 –25.00
Bright stock, No. 6½ color diluted	23.00 –25.00	23.00 –25.00	23.00 –24.00
600 D filtered	25.00 –27.00	25.00 –27.00	25.00 –27.00
600 Warren E filtered	19.00 –21.00	19.00 –21.00	19.00 –20.00
600 stm. refd, unfiltered	16.00 –18.00	16.00 –18.00	17.00 –19.00
650 stm. refd, unfiltered	18.00 –20.00	18.00 –20.00	19.00 –20.00
600 flash steam refined	19.00 –20.00	19.00 –20.00	19.50 –20.00
630 flash, steam refined	24.00 –25.00	24.00 –25.00	24.00 –25.00
RED PARAFFIN OILS (Vis. 100°)			
300 vis. No. 6½ color	9.50	9.50	9.50
250 vis. No. 6 color	9.00	9.00	9.00
200 vis. No. 6 color	8.25	8.25	8.25
PALE PARAFFIN OILS (Vis. 100°)			
230 vis. No. 3¾ color	10.00	10.00	10.00
180 vis. No. 3¼ color	9.50	9.50	9.50
100 vis. No. 2¼ color	5.00	5.00	5.00

Wax Market

(Prices in cents per pound, f.a.s. carload lots. Tests made by A. S. T. M. method with melting points converted into A. M. P. by adding 3° F.)

NEW YORK			
124-126 Yellow crude scale	1.875– 2.00	1.875– 2.00	1.875
122-124 White crude scale	2.00 – 2.125	2.00 – 2.125	2.00
124-126 White crude scale	2.125– 2.25	2.125– 2.25	2.125
123-125 Fully refined	2.75 – 3.00	2.75 – 3.00	2.875
125-127 Fully refined	2.875– 3.00	2.875– 3.00	3.00
128-130 Fully refined	3.125	3.125	3.125
130-132 Fully refined	3.25	3.25	3.25
133-135 Fully refined	4.125	4.125	4.125
135-137 Fully refined	4.25	4.25	4.25

NEW ORLEANS	Prices Nov. 7	Prices Oct. 31	Prices Oct. 24
124-126 Yellow crude scale	1.875	1.875	1.75 – 1.875
122-124 White crude scale	2.00	2.00	1.875– 2.00
124-126 White crude scale	2.125	2.00 – 2.125	1.875– 2.00
123-125 Fully refined	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00
125-127 Fully refined	2.875– 3.00	2.875– 3.00	2.875– 3.00
128-130 Fully refined	3.00 – 3.125	3.00 – 3.125	3.00 – 3.125
130-132 Fully refined	3.125– 3.25	3.125– 3.25	3.125– 3.25
133-135 Fully refined	4.00 – 4.125	4.00 – 4.125	4.00 – 4.125

Gulf Coast Bulk Market

(Prices are f. o. b. Gulf oil terminals representing sellers' opinions except prices specified to the contrary. Prices cover bulk shipments of 20,000 barrels or more, unless otherwise noted.)

For Domestic Shipment			
U. S. MOTOR GASOLINE:			
Below 65 octane number	5.50	5.50	5.50
65 octane number and above	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00
KEROSINE			
41-43 w.w.	4.375– 4.50	4.375– 4.50	4.375– 4.50
†Nominal.			
For Export Shipment			
GASOLINE			
U. S. Motor gasoline	4.00 – 4.125	4.25 – 4.375	4.25 – 4.375
60-62, 400 e.p. gasoline	4.125– 4.25	4.375– 4.50	4.25 – 4.375
61-63, 390 e.p. gasoline	4.25 – 4.375	4.50 – 4.625	4.375– 4.50
64-66, 375 e.p. gasoline	4.50 – 4.75	4.625– 4.875	4.625– 4.875
U. S. Motor, (cases cargoes)	$1.50	$1.50	$1.50
64-66, cases (cargoes)	$1.60	$1.60	$1.60
KEROSINE			
41-43 water white	4.00 –4.25	4.00 – 4.25	4.00 – 4.25
41-43 prime white	3.875–4.00	3.875– 4.00	3.875– 4.00
Water white, cases (cargoes)	$1.40	$1.40	$1.40
Prime white, cases (cargoes)	$1.30	$1.30	$1.30
(For Domestic and/or Export Shipment)			
GAS and BUNKER OILS			
*26-30 translucent gas oil	3.00 – 3.25	3.00 – 3.25	3.00 – 3.25
*30 plus translucent gas oil	3.25 – 3.50	3.25 – 3.50	3.25 – 3.50
Diesel Oil ships' bunkers	$1.50	$1.50	$1.50
Grade C bunker oil, for ships' bunkers, per bbl.	$0.60	$0.60	$0.60
Grade C bunker oil, per bbl. in cargoes	$0.45 –$0.50	$0.45 –$0.50	$0.45 –$0.50
*Less than ½ of 1% sulphur.			
MEXICAN CRUDE AND BUNKER OILS (f.o.b. Steamer, Tampico)			
Heavy Panuco crude taxes to be paid, per bbl.	$0.47 –$0.50	$0.47 –$0.50	$0.47 –$0.50
Grade C bunker oil for bunkering, taxes paid, per bbl.	$0.60	$0.60	$0.60
SOUTH TEXAS LUBRICATING OILS (Viscosity at 100° F. cold test 0 Tanker, f. o. b. Gulf oil terminals.)			
200 vis. No. 3 unfiltered pale	5.50 – 6.00	5.50 – 6.00	5.50 – 6.00
300 vis. No. 3 unfiltered pale	6.25 – 6.75	6.25 – 6.75	6.25 – 6.75
500 vis. No. 3½ unfiltered pale	7.00 – 7.50	7.00 – 7.50	7.00 – 7.50
750 vis. No. 4 unfiltered pale	7.50 – 8.00	7.50 – 8.00	7.50 – 8.00
1200 vis. No. 4 unfiltered pale	8.50 – 9.00	8.50 – 9.00	8.50 – 9.00
200 vis. No. 5-6 red oil	4.50 – 5.00	4.50 – 5.00	4.50 – 5.00
300 vis. No. 5-6 red oil	5.25 – 5.75	5.25 – 5.75	5.25 – 5.75
500 vis. No. 5-6 red oil	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
750 vis. No. 5-6 red oil	7.00 – 7.50	7.00 – 7.50	7.00 – 7.50
1200 vis. No. 5-6 red oil	9.00 – 9.75	9.00 – 9.75	8.75 – 9.50

Note: Red oil prices shown above cover oils with blue cast; one or two refiners ask 0.5c to 1c per gal. higher for green cast red oils.

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

Gasoline, U. S. Motor, 53-55 Gravity	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25
Gasoline, 400 e.p. blend 65 Octane No. and above	4.50 – 5.25	4.50 – 5.25	4.50 – 5.25
Gas oil, 30-34 per bbl.	$0.90 –$1.00	$0.90 –$1.00	$0.90 –$1.00
Diesel oil, 27 plus, per bbl.	$0.90 –$1.00	$0.90 –$1.00	$0.90 –$1.00
Bunker oil, 14-18 per bbl.	$0.60 –$0.75	$0.60 –$0.75	$0.60 –$0.75
Fuel oil, 14-18 per bbl.	$0.55 –$0.65	$0.55 –$0.65	$0.55 –$0.65
Kerosine, 38-40 w.w., 150 fire, per gal.	3.75 – 4.50	3.75 – 4.50	3.75 – 4.50
Cased Goods			
Gasoline, U. S. Motor	$1.45 –$1.60	$1.45 –$1.60	$1.45 –$1.60
Gasoline, 400 e.p. blend	$1.55 –$1.70	$1.55 –$1.70	$1.55 –$1.70
Kerosine, 38-40 w.w., 150 fire	$1.25 –$1.35	$1.25 –$1.35	$1.25 –$1.35
Kerosine, prime white	$1.05 –$1.20	$1.05 –$1.20	$1.05 –$1.20

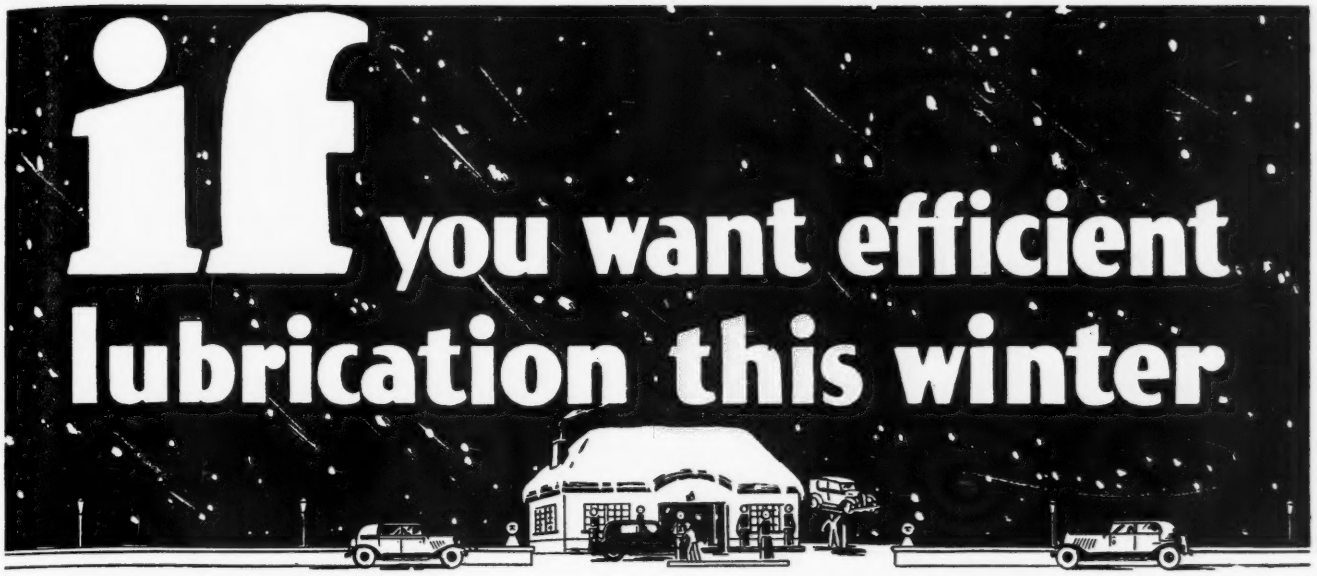
Tanker Rates

(Approximate tanker freight rates to Continental ports, in shillings per ton of 2240 pounds, British sterling: to U. S. ports, cents per barrel

Nov. 7

	Crude &/or Fuel Last Paid	Crude &/or Fuel Owners Ask	Refined Oil Last Paid	Refined Oil &/or Spirits Owners Ask
Calif-U.K./Continent*	12/6	15/-20/	14/6	17/-18/
Gulf-U.K./Continent*	8/6	8/6-9/	9	9/-10/
Calif-N. Atlantic (not E. of N. Y.)	42c	40-45c	40c	40-45c
Gulf-N. Atlantic** (not E. of N. Y.)	14.5 c	14-16c	16.5c	15-16c

*Continental ports in range between Bordeaux and Hamburg, both inclusive
**Venezuela loading same rate; Tampico 2 to 3c per bbl. additional.



BALCRANK lubricating equipment defies winter winds and lowering temperatures—performing efficiently and profitably during long winter months. You *must* prefer equipment that gives you year round service with high pressure lubrication regardless of the winter. No matter your requirement there is a Balcrank Lubricator that will work for you and return a profit. Let Balcrank recommend the lubricator you need—then Let Winter Come. The Cincinnati Ball Crank Co., Cincinnati, Ohio.

Balcrank "AA" Air Lubricator for all heavy fibrous greases—Trucks, Buses, etc. 40 pound capacity.
Balcrank "Z" Type Power Guns—ONE MAN, ONE POUND, Air Operated Lubricators—available in 4 models.
Balcrank "AR" air operated Lubricator—builds grease pressure up to 4500 pounds—dependable all winter long.
Balcrank "ER" Electric Lubricator—handles grease of any density—for heavy duty lubrication.
BALCRANK
SERVICE STATION EQUIPMENT
Balcrank "D" Foot Operated Lubricator—handles grease of any density—13 lb. capacity.
Brooking MEASURES
Balcrank "F" Air Lubricator—up to 6000 lbs. grease pressure.

Tank Wagon, Service Station Markets for Gasoline and Kerosine

(OIL PRICE HANDBOOK has t.w. and s.s. markets for a whole year, arranged for quick reference)

Tax column includes 1c federal tax, state gasoline tax, and city and county taxes as indicated in footnotes

These Prices in Effect Nov. 7, 1932, as Posted by Principal Marketing Companies

S.O. NEW JERSEY TERRITORY

Standard Gasoline	T.W.	Tax	Total T.W.	S.S.	Kerosine T.W.
Atlantic City, N. J.	11.7	4	15.7	16.7	11.2
Newark, N. J.	11	4	15	16	8.5
Annapolis, Md.	11.3	5	16.3	17.3	10
Baltimore, Md.	10.7	5	15.7	16.7	8
Cumberland, Md.	12.2	5	17.2	18.2	11.7
Washington, D. C.	11.2	3	14.2	15.2	10
Danville, Va.	12.4	6	18.4	19.4	11.9
Norfolk, Va.	10.8	6	16.8	17.8	10.3
Petersburg, Va.	11.9	6	17.9	18.9	11.4
Richmond, Va.	11.2	6	17.2	18.2	10.7
Roanoke, Va.	12.4	6	18.4	18.4	11.9
Charleston, W. Va.	12.1	5	17.1	18.1	11.6
Parkersburg, W. Va.	10.7	5	15.7	15.7	10.2
Wheeling, W. Va.	11.7	5	16.7	16.7	11.2
Charlotte, N. C.	13	7	20	21	12.5
Hickory, N. C.	13.2	7	20.2	21.2	12.7
Mt. Airy, N. C.	13.3	7	20.3	21.3	12.8
Raleigh, N. C.	12.8	7	19.8	20.8	12.3
Salisbury, N. C.	13.1	7	20.1	20.1	12.6
Charleston, S. C.	10.8	7	17.8	18.8	10.3
Columbia, S. C.	12.7	7	19.7	20.7	12.2
Spartanburg, S. C.	13	7	20	21	12.5

Discounts: To dealers on Standard gasoline, 2c off retail t.w. price, except Washington, D. C. and Baltimore, Md., where discount is 3c.

To commercial consumers: on t.w. deliveries, over a year off posted retail t.w.: 1,000 to 20,000 gals., 2c per gal.; 20,001 to 100,000 gals., 2.5c; 100,001 to 300,000 gals., 3c; and over 300,000 gals., 3.5c.

Kerosine Discount: 1c off t.w. price for 25 gals. or more, under contract thru territory except New Jersey, effective June 17, 1931.

S. O. NEW YORK

Socony Gasoline

Greater New York City: Boroughs of Manhattan, Bronx, Queens & Kings	12	4	16	16	8.5
Borough of Richmond	12	4	16	16	8.5
Albany, N. Y.	11.5	4	15.5	16.5	9
Buffalo, N. Y.	12.5	4	16.5	17.5	9
Rochester, N. Y.	12.5	4	16.5	17.5	9
Syracuse, N. Y.	12.5	4	16.5	17.5	9.5
Boston, Mass.	11	4	15	16	8
Augusta, Me.	13	5	18	19	9
Manchester, N. H.	13	5	18	19	8
Burlington, Vt.	13.5	5	18.5	19.5	8.5
New Haven, Conn.	12	3	15	16	8
Providence, R. I.	11	3	14	15	8

Dealer discount: on gasoline 2c off posted t.w. price, except 3c in New York City.

ATLANTIC REFINING

Atlantic White Flash Gasoline

Pittsburgh, Pa.	12.5	4	16.5	17.5	10
Philadelphia, Pa.	12	4	16	17	10
Allentown, Pa.	12.5	4	16.5	17.5	10
Erie, Pa.	12.5	4	16.5	17.5	10
Scranton, Pa.	12.5	4	16.5	17.5	10
Altoona, Pa.	12.5	4	16.5	17.5	10
Dover, Del.	12.5	4	16.5	17.5	10
Wilmington, Del.	12.5	4	16.5	17.5	10
Boston, Mass.	11	4	15	16	8
Springfield, Mass.	12	4	16	17	8
Worcester, Mass.	12	4	16	17	8
Fall River, Mass.	12	4	16	17	8
Providence, R. I.	11	3	14	15	8
Hartford, Conn.	12	3	15	16	8
New Haven, Conn.	12	3	15	16	8
Atlantic City, N. J.	11.7	4	15.7	16.7	11.2
Camden, N. J.	11.1	4	15.1	16.1	9.5
Trenton, N. J.	11.5	4	15.5	16.5	9.5
Annapolis, Md.	11.3	5	16.3	17.3	10
Baltimore, Md.	10.7	5	15.7	16.7	8
Hagerstown, Md.	11.9	5	16.9	17.9	10.4
Richmond, Va.	11.2	6	17.2	18.2	10.7
Wilmington, N. C.	10.9	7	17.9	18.9	10.4
Brunswick, Ga.	11	7	18	19	12.5
Jacksonville, Fla.	8	8	16	17	10

Dealer discount: on gasoline, "split dealers," 2c off posted t.w. price; to 100% dealers, 2.5c; to authorized dealers (under lease 1c per gal.), 2.5c off posted s.s. price. Commercial accounts, under contract for one year, are sold at a discount off the posted prices, with due consideration to competition.

*Georgia kerosine prices include 1c state tax.

Latest Changes In Tank Wagon Prices

Gasoline

S. O. New Jersey—S.s. only cut 1c, Roanoke, to 18.4c, **Nov. 4.**

Following discounts put into effect, Nov. 3, thru territory, to commercial consumers on t.w. deliveries, for purchases over the year, discount off posted retail t.w. price: 1000 to 20,000 gals., 2c per gal.; 20,001 to 100,000 gals., 2.5c; 100,001 to 300,000 gals., 3c; over 300,000 gals., 3.5c.

Atlantic Refining—T.w. and s.s. up 1c, Brunswick, to 18c and 19c respectively, **Oct. 27.**

S. O. Indiana—Red Crown: S.s. only up 2.4c, Quincy, to 17.4c, **Oct. 21.**

S.s. only up 1c, Des Moines, to 16.9c, **Oct. 20.**

S.s. only up 9/10c, Wichita, to 14.9c, **Oct. 29.**

S.s. only cut 2c, St. Joseph, to 13c, **Oct. 22.**

S.s. only up 1c, Bartlesville, to 17c, **Oct. 21.**

Stanolind: S.s. up 2.4c, Quincy, to 14.9c, **Oct. 21.**

S.s. cut 1.6c, Indianapolis, to 14.3c, **Nov. 2.**

S.s. up 1c, Des Moines, to 12.9c, **Oct. 20.**

S.s. up 3.6c, Fargo, to 18.6c, **Oct. 29.**

S.s. up 1c, Wichita, to 12c, **Oct. 29.**

T.w. and s.s. up 1c, Bartlesville, to 14c and 15c respectively, **Oct. 21.**

T.w. up 1.5c, s.s. 2.5c, Minneapolis, both to 13.4c, **Nov. 1.**

S. O. Louisiana—Standard gasoline cut ½c, Chattanooga, to 20c for t.w. and s.s., and Blue-Gas cut 1c, to 17c, **Nov. 3.**

Blue-Gas cut 1c, Bristol, to 17c, **Nov. 3.** Cut 1c, Nashville, to 17c, **Nov. 5.**

Continental Oil—T.w. and s.s. up 1c, Albuquerque, to 17c and 20c, **Oct. 28.**

Aviation Gasoline

Continental Oil—T.w. up 1c, Albuquerque, to 23c, **Oct. 28.**

Kerosine

Atlantic Refining—Up 1.1c, Camden, and up 1.5c, Trenton, both to 9.5c t.w., **Nov. 2.**

Magnolia Petroleum—Up 1c, Muskogee, to 8c t.w., **Oct. 26.**

S. O. OHIO

	T.W.	Tax	Total T.W.	S.S.	Kerosine T.W
Sohio X-70 Gasoline					
Ohio statewide	12.5	5	17.5	18	11.5
Darke, Greene and Miami counties	12.5	5	17.5	17.5	11.5
Lucas, Montgomery and Shelby counties	12	5	17	17	11.5
Renown Green (Third Grade)					
Ohio statewide		5		17	11.5
Clarke, Darke, Franklin, Greene, Hancock, Lucas, Marion and Miami counties:		5		16	11.5
Montgomery and Shelby counties		5		15	11.5

Dealer and commercial consumer discount: Sohio X-70, 2c off t.w. price; Renown Green, 1.75c off s.s. price; kerosine, 2.5c off t.w. In counties where prices are below statewide, discount on X-70 is generally 2.5c and on Renown Green, 1.5c.

Discount to commercial consumers at service stations (company owned and operated stations) on Sohio Ethyl and X-70 gasolines, beginning Oct. 11, 1932, 1c per gal. off s.s. price, any quantity.

S. O. KENTUCKY

Crown Gasoline

Lexington, Ky.	12.5	6	18.5	18.5	11.5
Louisville, Ky.	11	6	17	17	10
Paducah, Ky.	13	6	19	19	10
Covington, Ky.	13	6	19	19	11.5
Jackson, Miss.	13	7	20	20	*12
Vicksburg, Miss.	13	7	20	20	12
Birmingham, Ala.	14	*7	21	21	12
Mobile, Ala.	14	*7	21	21	12
Montgomery, Ala.	14	*8	22	22	*14
Macon, Ga.	13	7	20	20	*13
Atlanta, Ga.	13	7	20	20	*13
Augusta, Ga.	13	7	20	20	*12
Savannah, Ga.	13	7	20	20	*12.5
Jacksonville, Fla.	11	8	19	19	13
Miami, Fla.	12	8	20	20	12.5
Tampa, Fla.	12	8	20	20	14
Pensacola, Fla.	9	*9	18	18	12.5
Kyso Green (Third Grade)					
Lexington, Ky.	10	6	16	16	11.5
Louisville, Ky.	9	6	15	15	10
Paducah, Ky.	10	6	16	16	10
Covington, Ky.	11	6	17	17	11.5
Jackson, Miss.	11	7	18	18	*12
Vicksburg, Miss.	11	7	18	18	*12
Birmingham, Ala.	12	*7	19	19	12
Mobile, Ala.	12	*7	19	19	12
Montgomery, Ala.	12	*8	20	20	*14
Atlanta, Ga.	11	7	18	18	*13
Augusta, Ga.	11	7	18	18	*12
Macon, Ga.	11	7	18	18	*13
Jacksonville, Fla.	11	8	19	19	13
Pensacola, Fla.	7	*9	16	16	12.5

Dealer Discount: on Crown and Crown Ethyl gasolines, 3c off t.w. price thru territory; Kyso Green 2c.

***Taxes:** in the tax columns are included these city and county taxes at the following points: Birmingham, 1c city; Mobile, 1c city; Montgomery, 1c city and 1c county; Pensacola, 1c city. Georgia kerosine prices include 1c state tax. Montgomery kerosine price includes ½c city tax. Mississippi kerosine prices include 1c state tax.

S. O. INDIANA

Standard Red Crown Gasoline

Chicago, Ill.	11.1	4	15.1	15.1	10
Decatur, Ill.	13.6	4	17.6	17.6	10.1
E. St. Louis, Ill.	12.9	4	16.9	14.9	9.3
Joliet, Ill.	13.6	4	17.6	15.6	8.6
Peoria, Ill.	13.6	4	17.6	15.6	10.1
Quincy, Ill.	13.4	4	17.4	17.4	9.9
Springfield, Ill.	13.6	4	17.6	17.6	10.1
Indianapolis, Ind.	13.4	5	18.4	18.4	‡14.1
Evansville, Ind.	13.2	5	18.2	18.2	‡13.9
South Bend, Ind.	13.7	5	18.7	18.7	‡14.4
Detroit, Mich.	8.6	4	12.6	12.5	9
Grand Rapids, Mich.	13.5	4	17.5	16.5	10.3
Saginaw, Mich.	12.6	4	16.6	16.6	8
Marquette, Mich.	14.1	4	18.1	17.1	10.9
Green Bay, Wisc.	13.8	5	18.8	18.8	10.5
Madison, Wisc.	13.5	5	18.5	18.5	10.2
Milwaukee, Wisc.	12.3	5	17.3	17.3	10
La Crosse, Wisc.	14.4	5	19.4	19.4	11.1
Minneapolis, Minn.	12.4	4	16.4	15.4	11
Duluth, Minn.	14.7	4	18.7	18.7	11
Mankato, Minn.	14.3	4	18.3	18.3	8.1
Des Moines, Ia.	13.7	4	17.7	16.9	8

Above prices include these inspection fees on both gasoline and kerosine, per gallon, figured on basis of 50 gallons per barrel:

Alabama, 1/40c on gasoline, 1/2c on kerosine; Arkansas, 1/5c per gal. in a single barrel, 1/20c per gal. in bulk; Florida, 1/8c; Illinois, 3/100c; Indiana, 1/2c per gal. in a single barrel; 3/10c per gal. in lots of 2 to 10 bbls., 1/5c for 10 to 50 bbls., 2/25c for over 50 bbls.; Kansas, 1/50c, (3/50c can be charged to meet inspection department expenses); Louisiana, 1/32c; Minnesota, 2/25c; Nebraska, 3/50c; North Carolina, 1/4c; North Dakota, 1/20c; Oklahoma, 2/25c per gal. in lots of more than 50 bbls., 1/5c in lots less than 50 bbls.; South Carolina, 1/8c; South Dakota, 1/10c; Tennessee, 2/5c; and Wisconsin, 1/25c.

Kerosine inspection fees only: Iowa, 2/25c; Michigan, 4/5c per gal. for first 2 bbls.; 3/5c for next 3; 2/5c for next 5; 3/10c for next 15; and 1/5c per gal. in lots over 25 bbls.

Tank Wagon, Service Station Markets for Gasoline and Kerosine

Tax column includes 1c federal tax, state gasoline tax, and city and county taxes as indicated in footnotes

These Prices in Effect Nov. 7, 1932, as Posted by Principal Marketing Companies

S. O. INDIANA (*Cont'd*)

Standard Red Crown Gasoline

	T.W.	Tax	Total T.W.	S.S.	Kerosine T.W.
Davenport, Ia.	13.7	4	17.7	17	10.4
Sioux City, Ia.	13.3	4	17.3	17.3	10
Mason City, Ia.	13.7	4	17.7	17.7	10.4
St. Louis, Mo.	9.5	†4	13.5	11	9.4
Kansas City, Mo.	11.1	†4	15.1	15.1	8.7
St. Joseph, Mo.	11	†4	15	13	7.5
Fargo, N. D.	16.1	4	20.1	20.1	13
Grand Forks, N. D.	16.4	4	20.4	19.1	13.3
Minot, N. D.	16.1	4	20.1	20.1	12
Pierre, S. D.	14.2	5	19.2	19.2	11.5
Huron, S. D.	14.5	5	19.5	19.5	11.8
Wichita, Kans.	11.9	4	15.9	14 9	7
Bartlesville, Okla.	10.5	5	15.5	17	8

†Includes city tax of 1c.

Stanolind Gasoline (Third Grade)

Stanolind prices are normally 1.5c per gal. under Standard Red Crown. Most of the following points are exceptions:

Chicago, Ill.	9.6	4	13.6	13.6	10
Decatur, Ill.	12.1	4	16.1	16.1	10.1
E. St. Louis, Ill.	11.4	4	15.4	11.1	9.3
Joliet, Ill.	10.6	4	14.6	14.5	8.6
Peoria, Ill.	12.1	4	16.1	14	10.1
Quincy, Ill.	8.5	4	12.5	14.9	9.9
Springfield, Ill.	12.1	4	16.1	14.4	10.1
Kansas City, Mo.	8	†4	12	12	8.7
St. Joseph, Mo.	5.9	†4	9.9	9.9	7.5
St. Louis, Mo.	7.5	†4	11.5	10	9.4
Detroit, Mich.	8.1	4	12.1	12.1	9
Grand Rapids, Mich.	12	4	16	14.5	10.3
Marquette, Mich.	12.6	4	16.6	16.1	10.9
Saginaw, Mich.	10.6	4	14.6	14.6	8
Mankato, Minn.	9.5	4	13.5	14.3	8.1
Minneapolis, Minn.	9.4	4	13.4	13.4	11
Evansville, Ind.	10	5	15	14	‡13.9
Indianapolis, Ind.	11.9	5	16.9	14.3	‡14.1
South Bend, Ind.	12.2	5	17.2	17.2	‡14.4
Davenport, Ia.	12.2	4	16.2	13	10.4
Des Moines, Ia.	9	4	13	12.9	8
Mason City, Ia.	12.2	4	16.2	13.6	10.4
Sioux City, Ia.	10	4	14	13	10
Green Bay, Wisc.	9.6	5	14.6	14.3	10.5
La Crosse, Wisc.	12.9	5	17.9	15	11.1
Madison, Wisc.	12	5	17	16.4	10.2
Milwaukee, Wisc.	9.3	5	14.3	14.3	10
Huron, S. D.	11.1	5	16.1	17.1	11.8
Fargo, N. D.	11	4	15	18.6	13
Grand Forks, N. D.	14.9	4	18.9	16	13.3
Wichita, Kan.	8	4	12	12	7
Bartlesville, Okla.	9	5	14	15	8

†Includes city tax of 1c. ‡Includes 4 cent state tax. **Q.D.A.** (Effective May 4, 1931):

Discounts to resellers, except in Chicago, all quantities per month:

Off s.s. under 75,000 gals.: Ethyl: 3c, Red Crown 2.5c, Stanolind 1.5c. Off t.w. over 75,000 gals.: Ethyl 4c, Red Crown, 3.5c, Stanolind 2c. (See also last paragraph below).

Chicago reseller discounts: any quantity Ethyl 4c, "regular" 3.5c, third grade 2c, by principal marketers. Discounts are off s.s. below 75,000 gals., and off t.w. above 75,000 gals.

Consumer discounts, off t.w., outside Chicago: 500 to 75,000 gals., Ethyl 3c, Red Crown 2.5c, Stanolind 1.5c. Over 75,000 gals., Ethyl 4c, Red Crown 3.5c, Stanolind 2c.

Chicago consumer discounts, off t.w.: over 500 gals., Ethyl 4c, regular 3.5c, third grade 2c.

Effective Nov. 4, 1931, to all buyers from t.w., 25 gals. and over, all gasolines. 1c off t.w. price. No change in total discount to contract customers.

Discount to commercial consumers at service stations (company owned or controlled stations), beginning Oct. 1, 1932: 1c per gal. off s.s. price on Ethyl and Standard Red Crown gasolines, in any quantity.

S. O. NEBRASKA

Red Crown Gasoline

Omaha, Neb.	11.9	5	16.9	17.9	10.25
McCook, Neb.	14	5	19	19	11.75
Norfolk, Neb.	13.75	5	18.75	19.75	10.75
North Platte, Neb.	14	5	19	19	9
Scottsbluff, Neb.	14	5	19	19	10

Dealer discount: on gasoline off normal s.s. prices: Ethyl 3c; Red Crown 2.5c.

S. O. LOUISIANA

Standard Gasoline

	Posted Retail T.W.	Tax	Total Posted Retail T.W.	Posted Retail S.S.	Kerosine T.W.
Little Rock, Ark.	11.5	7	18.5	18.5	10
Alexandria, La.	8	*7	15	15	*11
Baton Rouge, La.	11	6	17	17	*11
New Orleans, La.	9.5	*7	16.5	16.5	*12
Lake Charles, La.	11.5	*7	18.5	18.5	*11
Shreveport, La.	10.5	6	16.5	16.5	*11
Lafayette, La.	11	*7	18	18	*11
Bristol, Tenn.	12	8	20	20	12
Chattanooga, Tenn.	12	8	20	20	11.5
Knoxville, Tenn.	12.5	8	20.5	20.5	11.5
Memphis, Tenn.	8	8	16	16	9
Nashville, Tenn.	12.5	8	20.5	20.5	11

Blue-Gas (Third Grade)

	Tax		Total Posted Retail S.S.	Kerosine T.W.
Little Rock, Ark.	7	....	15	10
Alexandria, La.	*7	....	14	*11
Baton Rouge, La.	6	....	16	*11
New Orleans, La.	*7	....	15	*12
Lafayette, La.	*7	....	15	*11
Lake Charles, La.	*7	....	16	*11
Shreveport, La.	6	....	14	*11
Bristol, Tenn.	8	....	17	12
Chattanooga, Tenn.	8	....	17	11.5
Knoxville, Tenn.	8	....	19.5	11.5
Memphis, Tenn.	8	....	15	9
Nashville, Tenn.	8	....	17	11

Open dealer and commercial consumer discounts: on Standard gasoline, 2½c per gal. off posted retail tank wagon price since Feb. 23, 1932; 2c on kerosine: no discount on Blue-Gas.

Lease and agency discounts: Esso gasoline, 2.5c; Standard gasoline, 2c; Blue-Gas, 1c off s.s. price, plus 1c per gal. rental.

*Lake Charles, Alexandria, New Orleans and Lafayette gasoline tax includes 5c state tax, 1c federal tax, and 1c parish tax. Louisiana kerosine prices include 1c state tax; New Orleans includes also 1c parish tax.

MAGNOLIA PETROLEUM

Mobilgas

	T.W.	Tax	Total T.W.	S.S.	Kerosine T.W.
Muskogee, Okla.	8.5	5	13.5	16	8
Oklahoma City	9.5	5	14.5	17	8
Tulsa, Okla.	9.5	5	14.5	17	8
Fort Smith, Ark.	11.5	†5	16.5	16.5	10
Little Rock, Ark.	11.5	7	18.5	18.5	10
Texarkana, Ark.	12	*5	17	17	11
Dallas, Tex.	9.5	5	14.5	17	8
El Paso, Tex.	11	5	16	18	10
Fort Worth, Tex.	9.5	5	14.5	17	8
Houston, Tex.	9.5	5	14.5	17	8
San Antonio, Tex.	9.5	5	14.5	17	9

Metro Gasoline (Third Grade)

Muskogee, Okla.	7	5	12	13	7
Oklahoma City	7	5	12	13	8
Tulsa, Okla.	8	5	13	14	8
Fort Smith, Ark.	7	†5	12	14	10
Little Rock, Ark.	8	7	15	15	9
Texarkana, Ark.	7	5	12	13	11
Dallas, Tex.	7	5	12	13	8
El Paso, Tex.	10	5	15	15	10
Fort Worth, Tex.	7	5	12	13	8
Houston, Tex.	8	5	13	14	8
San Antonio, Tex.	7	5	12	13	9

Dealer discounts: on Mobilgas 2.5c off t.w. price to dealers at Little Rock, Fort Smith and Texarkana. On Metro gasoline, 1c per gal. off t.w. price to dealers thru territory. Arkansas kerosine prices are subject to 2c discount off t.w. price.

*In Texarkana, 4c Texas tax applies; outside Texarkana, 6c Arkansas tax applies.

†In Fort Smith, 4c Oklahoma tax applies; outside Fort Smith, 6c Arkansas tax applies.

CONTINENTAL OIL

Conoco Gasoline

Denver, Colo.	11	5	16	19	12.5
Pueblo, Colo.	11	5	16	19	12.5
Grand Junc., Colo.	15	5	20	23	14.5
Casper, Wyo.	12	5	17	20	10
Cheyenne, Wyo.	11	5	16	19	11.5
Butte, Mont.	14	6	20	23	17
Helena, Mont.	17	6	23	26	17
Salt Lake City, Utah	13	5	18	21	16
Boise, Ida.	13.5	6	19.5	22.5	18
Twin Falls, Ida.	13.5	6	19.5	22.5	18
Albuquerque, N. M.	11	6	17	20	14

S. O. CALIFORNIA

Standard Gasoline

	T.W.	Tax	Total T.W.	S.S.	Kerosine T.W.
San Francisco, Cal.	11	4	15	18	12.5
Los Angeles, Cal.	10.5	4	14.5	17.5	12.5
Fresno, Cal.	11.5	4	15.5	18.5	14
Phoenix, Ariz.	12.5	6	18.5	21.5	†20.5
Reno, Nev.	16	5	21	22	15.5
Portland, Ore.	12	5	17	19	13.5
Seattle, Wash.	12	6	18	21	13.5
Spokane, Wash.	15.5	6	21.5	24.5	18
Tacoma, Wash.	12	6	18	21	13.5

†Includes 5c state tax.

Discounts: On Standard and Standard Ethyl gasolines, to 100% dealers, 1c off t.w. price, beginning May 24 in Oregon and Washington, and June 27 in California, Nevada and Arizona.

CANADA

Prices of Imperial Oil Ltd.

(Per Imperial Gallon, which is 1.2 U. S. Gallons)

Imperial Three Star Gasoline	T.W.	Tax	Total T.W.	S.S.	Kerosine T.W.
Hamilton, Ont.	18	6	24	27	16.5
Toronto, Ont.	18	6	24	27	17.5
Brandon, Man.	23.5	7	30.5	34	20.5
Winnipeg, Man.	20.5	7	27.5	31	17.5
Regina, Sask.	24.5	6	30.5	34.5	21.5
Saskatoon, Sask.	26.5	6	32.5	36.5	23.5
Edmonton, Alta.	25.5	5	30.5	34	22.5
Calgary, Alta.	22	5	27	30.5	19
Vancouver, B. C.	21	7	28	31	24
Montreal, Que.	17.5	6	23.5	26.5	15
St. John, N. B.	20	7	27	31	22
Halifax, N. S.	20	6	26	30	22

Aviation Gasoline Prices

Following are tank wagon prices of aviation gasoline in principal marketing territories. Tax column includes 1c federal tax, and state tax; also municipal taxes as indicated in footnotes.

S. O. NEW JERSEY

Prices in Effect Nov. 7, 1932

Stanavo Aviation Gasoline	T.W.	Tax	Total T.W.
Newark, N. J.	16	1	17
Baltimore, Md.	16	5	21
Washington, D. C.	16.3	3	19.3

COLONIAL BEACON OIL CO.

Stanavo Aviation Gasoline			
New York City	16	3	19
Boston, Mass.	18	4	22

S. O. PENNSYLVANIA

Stanavo Aviation Gasoline			
Philadelphia, Pa.	15.5	4	19.5
Pittsburgh, Pa.	16.5	4	20.5
Altoona, Pa.	16.5	4	20.5
Harrisburg, Pa.	15.5	4	19.5

S. O. OHIO

Sohio Aviation Gasoline			
Thru Ohio	15	5	20

Discounts: to airports, 1 to 4c, based on quantity.

S. O. INDIANA

Stanavo Aviation Gasoline			
Chicago	16.1	4	20.1
Indianapolis, Ind.	16.4	5	21.4
Detroit, Mich.	17	4	21
Milwaukee, Wisc.	16.3	5	21.3
Minneapolis, Minn.	17.4	4	21.4
St. Louis, Mo.	15.5	3	18.5
Kansas City, Mo.	16.1	*4	20.1
Fargo, N. D.	19.1	4	23.1
Huron, S. D.	17.5	5	22.5
Wichita, Kan.	15	4	19

*Includes 1c city tax.

(Continued on page 68)

ASK ABOUT OUR EXCLUSIVE FRANCHISE AGREEMENT

You'll find it especially attractive!

AMONG the 700-odd oil jobbers who are marketing Freedom 100% Pennsylvania Motor Oils are many who are enjoying our especially attractive Franchise Agreement covering exclusive territory on our "Fort Pitt" and "Beaver Penn" brands. Others are marketing Freedom Motor Oils under their own brand name and are finding this both a source of customer satisfaction and handsome profit.

We would like to have you ask us about this exclusive Franchise Agreement, also for quotations. Our jobber-customers are now reporting particularly fine results from Freedom *Low Cold Test Oils.* Made from the finest 100% Pennsylvania Crudes, refined and dewaxed by special Freedom processes which include pressing at temperatures below zero, they possess all of the extra lubricating characteristics for which Freedom has become famous and in addition provide appreciably easier starting in coldest weather.

In addition to Freedom *Low Cold Test Oils* we also can supply other motor oils made (Sharples Process) to your specifications or tested specifications of this 53-year-old organization. Quick shipments in tank cars, compartment tank cars or carloads of barrels or drums. Your request for full information and quotations will receive immediate attention.

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THE FREEDOM OIL WORKS CO.
120 Third St., Freedom, Pa.

Refineries at FREEDOM and CORAOPOLIS, PA.

Some of Our Specialties

145 Viscosity Sharples Bright Stock
85/90 Viscosity Sharples Bright Stock
100% Pennsylvania Neutrals
600 Steam Refined
650 Steam Refined
600 Flash Steam Refined
630 Flash Steam Refined
Freedom Filtered Kerosene Oil

Winkler-Koch to Handle Zinc Chloride Process

TULSA, Nov. 5.—Agreement has been reached between the Winkler-Koch Engineering Co., of Wichita, Kans., and the Vapor Treating Processes, Inc., whereby under a limited agreement the former becomes the representative of the latter in the sale, license, design and construction of units for the use of the Lachmann Zinc Chloride treating process throughout the greater part of the United States. The exceptions to this agreement are the Pacific Coast, and certain large refining companies.

Vapor Treating Processes Inc. is a subsidiary of the Richfield Oil Co. of California. According to the contracting officials units are to be supplied to licensees at cost, without overhead charges or extra fees. Royalties are stated to be decidedly low, in comparison to those charged for other treating processes, and will vary somewhat with the difficulty of the problem to be solved in the individual refinery. Royalty may be paid regularly on a throughput basis, or a fully paid-up royalty plan may be chosen, whereby for a lump sum the use of the process is granted without further payment or cost.

The Lachmann process for treating petroleum distillates in the vapor phase using zinc chloride as the reagent was developed in California by Dr. A. Lachmann, and has been applied to various treating problems, especially on light straight-run and cracked distillates. (See NATIONAL PETROLEUM NEWS, Nov. 11, 1931, page 32E). It is claimed to reduce gum while conserving anti-knock quality, and to give high color stability to the treated distillate.

Texaco Gets Contract For Aviation Gas

NEW YORK, Nov. 7.—An entire gasoline requirements contract for a year has been placed with The Texas Co. by the Transcontinental Western Air System, J. B. Jernigan, aviation superintendent for Texaco, announced.

Gasoline, under the contract, will be laid down at all of the airway system's 24 terminals. The system operates 55 airplanes, flying about 524,940 miles a month. The Texas Co. now is supplying lubricating oil.

Terminals are at New York, Philadelphia, Harrisburg, Pa., Pittsburgh, Columbus, Indianapolis, St. Louis, Kansas City, Wichita, Amarillo, Albuquerque, Winslow and Kingman, Ariz., Los Angeles, Bakersfield, Fresno, San Francisco, Oklahoma City, Tulsa, Springfield, Mo., Chicago, Detroit, Toledo and Ft. Wayne.

Crude Oil Prices (in Effect Nov. 7, 1932)

Crude prices for the whole year in OIL PRICE HANDBOOK published annually
(Prices are per barrel at the well; A.P.I. gravity).

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Penna. Grade Oil in Southwest Penna. Pipe Lines.....$1.42
(Effective Oct. 3, 1932)

Penna. Grade Oil in Eureka Pipe Lines (West Virginia)..... 1.37
(Effective Oct. 3, 1932)

Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O.).....†1.22
(Effective Oct. 3, 1932)

Corning Oil in Buckeye Pipe Lines (Ohio).... 0.85
(Effective Oct 4, 1932)

†For Macksburg oil run previous to March 1, 1932, $1.17.

Posted by Other Companies

Tide Water Pipe Co., Ltd.:
Bradford-Alleghany district (Penna. and N. Y.).....$1.72
(Effective Oct. 3, 1932)

*The Pennzoil Co.:
Penna. Grade Oil in National Transit Lines*$1.67
(Effective Oct. 3, 1932)

Ashland Refining Co.:
Somerset Oil in Ashland Lines (Kentucky)..$0.85
(Effective April 26, 1932)

Stoll Oil Refining Co.:
Stoll Pipe Line Oil (Kentucky)..... $1.00
(Effective June 10, 1932)

*The Pennzoil Co. posts $1.67 in Cochran, Franklin, Hamilton and Doolittle, Pa. fields; prices in other districts range down to $1.62 per bbl. at wells.

MICHIGAN

(Posted by Pure Oil Co.)

Midland, Midland County (July 13, 1932)...$0.85

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Effective April 11, 1932

Wooster	$1.25	Princeton	$1.10
Lima	1.15	Illinois	1.10
Indiana	0.75	West Kentucky	1.05

CANADIAN CRUDE

Posted by Imperial Oil Refineries, Ltd.
Ontario

Effective Nov. 3, 1931

Petrolia.....$1.90
Oil Springs..... 1.97

Turner Valley, Alta.:

(Effective April 21, 1932)

40-44.9	$1.56	Naphtha:	
45-49.9	2.18	†Clear	$3.32
50 and above	2.80	†Discolored	3.08

†Clear naphtha: 22 color, 10 lbs. vapor pressure, 90% recovery, end point, 410° A.P.I. Discolored naphtha: 90% recovery and 10 lbs. vapor pressure.

OKLAHOMA, KANSAS and NORTH TEXAS

Prices of Stanolind Crude Oil Purchasing Co.
(In Oklahoma, Kansas, North and North Central Texas)

(Effective April 11, 1932)

Below 29	$0.76	35-35.9	$0.90
29-29.9	0.78	36-36.9	0.92
30-30.9	0.80	37-37.9	0.94
31-31.9	0.82	38-38.9	0.96
32-32.9	0.84	39-39.9	0.98
33-33.9	0.86	40 and above	1.00
34-34.9	0.88		

On April 1, 1932, above prices posted by Barnsdall and Bartex Pipe Line Co. (Phillips Pet.). April 11, Humble Oil & Refining Co., Gulf Refining Co. and Carter Oil Co. met, Carter's schedule having these five lower grades: below 25, $0.68; 25-25.9, $0.70; 26-26.9, $0.72; 27-27.9, $0.74; 28-28.9, $0.76.

Oct. 15, 1932, Sun Oil, Sinclair-Prairie, The Texas Co., Magnolia Petroleum and Continental Oil advanced Mid-Continent crude 12c on all grades over those shown above.

East Texas

The Texas Co., Magnolia and Sinclair-Prairie post $1.10 effective Oct. 15, 1932.
Humble posts $0.98 effective Oct. 1, 1932.

Magnolia Petroleum Co.

(In Oklahoma, North, North Central and Central Texas)

(Including in North and North Central Texas: Burkburnett, Archer, Stephens, Henrietta, Electra, Comanche and Olden; in Central Texas: Mexia, Wortham, Corsicana Light and Panola county).

Effective Oct. 15, 1932

Below 28	$0.79	34-34.9	$1.00
28-28.9	.88	35-35.9	1.02
29-29.9	.90	36-36.9	1.04
30-30.9	.92	37-37.9	1.06
31-31.9	.94	38-38.9	1.08
32-32.9	.96	39-39.9	1.10
33-33.9	.98	40 and above	1.12

Lytton Springs, Tex.....$1.00
Corsicana heavy..... 0.74

PANHANDLE TEXAS

Humble Oil & Refining Co.

Effective April 11, 1932

Hutchinson-Carson Counties		Gray County	
Below 35	$ .66	.....	$0.76
35-35.9	.68	.....	.78
36-36.9	.70	.....	.80
37-37.9	.72	.....	.82
38-38.9	.74	.....	.84
39-39.9	.76	.....	.86
40 and above	.78	.....	.88

Oct. 15, 1932, Magnolia and The Texas Co. advanced Hutchinson-Carson counties 9c and Gray county 11c over those shown above.

WEST TEXAS and NEW MEXICO

Humble Oil & Refining Co.

Effective April 11, 1932

Pecos, Winkler, Crane, Upton, Crockett, Ector, Howard and Glasscock Counties, Tex., and Lea county, N. Mex.....$0.65

Oct. 15, 1932, Magnolia and The Texas Co. posted $0.75 for West Texas crude.

SOUTH and SOUTHWEST TEXAS

(Posted by Humble Oil & Refining Co.)

Effective April 11, 1932

Mirando	$0.80	Salt Flat	$0.75
Darst Creek	0.75	Pettus, Bee Cty.	1.00

(Posted by Magnolia Petroleum Co.)

Effective Oct. 15, 1932

Mirando	$0.90	Darst Creek	$0.85
		Luling	0.74

NORTH LOUISIANA—ARKANSAS FIELDS

Prices of Standard Oil Co. of Louisiana

Caddo, Homer, Haynesville, Bull Bayou, El Dorado, Crichton, De Soto, Sabine, Sarepta and Carterville.

Effective April 11, 1932

Below 25	$0.68	33-33.9	$0.86
25-25.9	.70	34-34.9	.88
26-26.9	.72	35-35.9	.90
27-27.9	.74	36-36.9	.92
28-28.9	.76	37-37.9	.94
29-29.9	.78	38-38.9	.96
30-30.9	.80	39-39.9	.98
31-31.9	.82	40 and above	1.00
32-32.9	.84		

Smackover.....$0.65
*Urania, La. (Effect Oct. 15, 1932)..... 0.70
†Stevens, Ark.:
Below 29.....$0.61
29 and above..... 0.64

*Urania posted by Louisiana Oil Refining Corp.
†Stephens posted by Atlantic Oil Producing Co.

Oct. 15, 1932, The Texas Co. and Magnolia advanced North Louisiana-Arkansas crude 12c over those shown above.

GULF COASTAL

Posted by Humble Oil & Refining Co.

Effective April 11, 1932

Below 25	$0.80	33-33.9	$0.89
25-25.9	.81	34-34.9	.90
26-26.9	.82	35-35.9	.91
27-27.9	.83	36-36.9	.92
28-28.9	.84	37-37.9	.94
29-29.9	.85	38-38.9	.96
30-30.9	.86	39-39.9	.98
31-31.9	.87	40 and above	1.00
32-32.9	.88		

Refugio heavy.....$0.80

Oct. 15, 1932, The Texas Co. and Sinclair-Prairie advanced Gulf Coast crude 10c over prices shown above.

*Includes these fields: Barbers Hill, Goose Creek, Hull, Humble, Liberty, Moss Bluff, Mykawa, Orange, Pierce Junction, Rabbs Ridge, Raccoon Bend, Refugio light, Sour Lake, Spindletop, Sugarland and West Columbia.

New Skimming Plants in Wyoming, Nebraska

TULSA, Oct. 24.—Construction of a skimming plant in the Oregon Basin field, Wyoming, by the Orchard Oil Co., was announced a few days ago by that company. This company has extensive producing holdings in that field, and the new plant is to be built to take care of this production, officials stated.

The capacity of the plant was not announced, but is stated to be an experimental unit, which may be the nucleus of a refinery at that location which the company is considering as its expansion program for 1933. According to Charles Orchard of Denver, president of the company, 16 or 17 per cent of gasoline may be produced from this crude by skimming. The remainder of the crude he expects to sell as fuel oil, probably to railroads, smelters, etc.

A new skimming plant is also being erected at Chadron Nebr., by Geo. A. Evans, according to reports from Casper. This will be the first refinery for Chadron, located a half-mile west of the town. The plant will operate on Osage crude, producing straight-run gasoline, fuel oil and tractor distillate.

Building New Oil Base for Canada

TORONTO. — The new port of Churchill on Hudson Bay is being planned as a base for distribution of petroleum products for western Canada by Imperial Oil, Ltd. The company has applied to the Manitoba government for 50 acres of land at the northern seaport adjoining the government docks.

Products will be shipped by sea from the company's Halifax refinery to Churchill. Plans call for a pipeline from the docks to the tanks which will ultimately number 15, according to reports.

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Guarantees the Quality of Gulf Products

COASTAL AND PARAFFINE CRUDES
GASOLINE—LUBRICATING OILS
NAPHTHA—GAS—OILS
WAX—PETROLEUM COKE
CYLINDER—ENGINE—CORDAGE

Gulf Refining Company

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PITTSBURGH, PA.

District Sales Offices: New York, Boston, Philadelphia, Louisville, Atlanta, Houston, New Orleans

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WAX PLANT EQUIPMENT

Filter Presses — *Wax Moulding Presses*
Wax Distillate Chilling Machines — *Scale Wax Cooling Drums*
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BETHLEHEM STEEL COMPANY, *General Offices: Bethlehem, Pa.*

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"OCTANOL." Ser. No. 330,530. Vapor Phase Oils Inc., New York City. For a preparation to be added to a motor fuel to increase the antiknock characteristics of said fuel and the efficiency thereof.

"BURNOL," picture of an automobile, a circle and triangle. Ser. No. 326,276. Burnol Petroleum Co., Los Angeles, Calif. For chemical compounds to be added to gasoline to improve combustion.

"MICRO - PHYTIC PROCESSED." Ser. No. 302,329. Panther Oil & Grease Mfg. Co., Fort Worth, Tex. For lubricating oils.

"EAGLEINE." Ser. No. 326,731. The Perolin Company of America, Chicago, Ill. For lubricating oils and greases.

"HOPPE'S." Ser. No. 330,091. Frank A. Hoppe, Incorporated, Philadelphia, Pa. For gun greases and lubricating oils.

"Picture of a Viking." Ser. No. 318 - 961. Viking Oil Corporation, Clarendon, Pa. For lubricants in oil & grease form.

"OCTANOYL." Ser. No. 323,934. Calumet Refining Co., Chicago, Ill. For penetrating oils for lubricating, light lubricating oils, and top cylinder lubricating oils.

"ADMIRAL and design." Ser. No. 328,142. Strauss Stores Corporation, doing business as Admiral Products Company, Brooklyn, N. Y. For penetrating and lubricating oils for automobile leaf springs.

"HYDROFINED." Ser. No. 330,209. Standard Oil Company of New Jersey, Wilmington, Del. For lubricating oils.

"FIRE CHIEF." Ser. No. 330,213. The Texas Company, New York City. For gasoline.

Graham Joins Globe

KEARNEY, Neb.—B. F. Graham, with Producers & Refiners Corp. for nine years, has joined the sales force of Globe Oil & Refining Co., and is covering the state of Nebraska. Globe is building a refinery at McPherson, Kansas, and this will be the company's fourth plant. Mr. Graham is making his headquarters in Kearney, Neb.

Crude Oil Prices (in Effect Nov. 7, 1932)

(Prices are per barrel at the well; A. P. I. Gravity)

(Crude Oil Prices for the whole year in OIL PRICE HANDBOOK published annually)

ROCKY MOUNTAIN FIELDS

(Posted by Midwest Refining Co.)

Effective April 11, 1932

Salt Creek, Wyo.:

Below 29°	$0.76	32-32.9	$0.84
29-29.9	0.78	33-33.9	0.86
30-30.6	0.80	34-34.9	0.88
31-31.9	0.82	35-35.9	0.90
36-36.9	$0.92	39-39.9	$0.98
37-37.9	0.94	40 and above	1.00
38-38.9	0.96		

Salt Creek prices met by The Texas Co. April 11.

Effective April 11, 1932

Cat Creek, Mont.	$1.20
Hogback, N. Mex.	0.80
Hobbs, N. Mex.	0.65

(Posted by Ohio Oil Co.)

Effective June 1, 1932

Elk Basin, Wyo.	$1.10
Grass Creek Light	1.10
Rock Creek	0.90

Effective April 11, 1932

Big Muddy	$0.98
Lance Creek	1.15
Sunburst, Mont.	1.05

CALIFORNIA CRUDE

Standard Oil Co. of California

Effective June 26, 1932

Gravity	Signal Hill	Seal Beach Alamitos Heights Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canon	Elwood Terrace	Torrance Richfield	Whittier La Habra	Montebello	Athens Rosecrans Dominguez	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Elk Hills Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills	Ventura Avenue (Associated Oil Co.)	Santa Paula (Union Oil Co.)	Orcutt (Union Oil Co.)
14-19.9	$0.65	$0.65	$0.65	$0.65	$0.65	....	$0.65	$0.65	$0.65	....	$0.65	....	$0.55	$0.55	$0.55	$0.55	$0.55	....	$0.72	$0.65	$0.55
20-20.9	.69	.69	.71	.69	.69	....	.69	.68	.65	....	.65	....	....	.59	.59	.59	.57	....	.77	.69	.59
21-21.9	.74	.74	.77	.74	.74	....	.74	.72	.67	....	.66	....	....	.63	.63	.62	.60	....	.82	.72	.63
22-22.9	.79	.79	.82	.78	.79	....	.79	.77	.70	....	.70	....	....	.69	.69	.65	.63	....	.86	.75	.69
23-23.9	.84	.84	.87	.82	.84	F.o.b. Ship	.84	.83	.73	....	.76	....	....	.75	.75	.68	.66	....	.90	.78	.75
24-24.9	.89	.89	.92	.86	.89		.89	.89	.76	$0.89	.81	$0.73	....	.81	.81	.72	.69	....	.93	.81	.81
25-25.9	.93	.93	....	.91	.93		.93	....	.80	.93	.86	.79	....	.87	.87	.75	.72	....	.96	.84	.82
26-26.9	.97	.97	....	.96	.97		....	....	....	.97	.90	.84	....	.92	.91	....	....	....	.99	.87	.97
27-27.9	1.00	....	....		1.00		....	....	....	1.00	.94	.89	....	.97	.94	....	....	....	1.02	.90	....
28-28.9	1.03	....	....	Subject to field gathering charge of 5c per barrel.	1.03		....	....	....	1.03	.98	.94	....	1.02	.99	....	....	....	....	.93	....
29-29.9	1.06	....	....		....		....	....	....	1.06	1.02	.98	....	1.07	1.02	....	....	....	....	.96	....
30-30.9	1.09	....	....		....		....	....	....	1.09	1.05	1.02	....	1.12	1.05	....	....	....	....	.99	....
31-31.9	....	....	....		....		....	....	....	1.12	....	1.06	....	....	....	....	....	....	....	....	....
32-32.9	....	....	....		....		....	....	....	1.15	....	1.10	....	....	....	....	....	....	....	....	....
33-33.9	....	....	....		....	$1.04	....	....	....	....	....	1.14	....	....	....	....	....	$0.91	....	....	....
34-34.9	....	....	....		....	1.10	....	....	....	....	....	1.18	....	....	....	....	....	.93	....	....	....
35-35.9	....	....	....		....	1.16	....	....	....	....	....	1.22	....	....	....	....	....	.95	....	....	....
36-36.9	....	....	....		....	1.22	....	....	....	....	....	....	....	....	....	....	....	.97	....	....	....
37-37.9	....	....	....		....	1.28	....	....	....	....	....	....	....	....	....	....	....	.99	....	....	....
38-38.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1.01	....	....	....
39 and above	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1.03	....	....	....

REFINERS' and COMPOUNDERS' SUPPLIES

Following are average market prices for materials used by refiners and compounders effective on the date shown.

Refiners' Supplies

	Nov. 7	Oct. 31
Soda Ash Light 58½ bags, cwt.	$1.15-1.38	$1.15-1.38
Silicate of Soda 60 deg. drums, cwt.	$1.75-1.90	$1.75-1.90
Silicate of Soda 40 deg. drums, cwt.	$0.70-1.00	$0.70-1.00
Silicate of Soda 40 deg. drums, cwt.	$0.70-1.00	$0.70-1.00
Sal Soda wks.	$0.90-1.00	$0.90-1.00
Caustic Soda 76% solid, cwt.	$2.50	$2.50
Sulfuric Acid 60 deg. tank cars, f.o.b. shipping point per ton	$11.00-12.50	$11.00-12.50
Sulfur, flowers of, cwt.	$3.10-4.05	$3.10-4.05
Liquid Chlorine, tank cars, wks., lb.	1.55	1.55

Compounder's Supplies

	Nov. 7	Oct. 31
Vegetable Oils		
Linseed carloads, spot, lb.	6.60–6.70	6.70
Tanks, spot	6.00–6.10	6.10
Soya Bean, Tank, coast, lb.	2.70-2.80	2.75-2.85
Oleic Acid		
Distilled, tanks, lb.	5.75	5.75
Distilled, bbls., lb.	7.25-7.375	7.25-7.375
Saponified, tanks, lb.	6.00	6.00
Saponified, bbls., lb.	6.75-7.00	6.75-7.00
Lard Oils		
Prime Winter Strained, lb.	9.00	9.00
Extra Winter Strained, lb.	7.75	7.75
Extra No. 1, lb.	6.50	6.50
No. 1, lb.	6.25	6.25
No. 2, lb.	6.00	6.00
Tallow oil, lb.	5.75	5.75
Neatsfood Oil		
Pure, bbls., lb.	8.00	8.00
Extra, bbls., lb.	6.75	6.75
No. 1 bbls., lb.	6.50	6.50
Cold Pressed, lb.	11.75	11.75
Fish Oils		
Menhaden Oil		
Light Pressed, gal.	31–32	31–32
Light Pressed, tank cars, N. Y., gal.	23.50-24	23.50-24
Yellow bleached, gal.	34.50–35	34.50–35
Whale, extra winter bleached, gal.	51–52	51–52
Naval Stores		
Steam distilled turpentine, N. Y., gal.	46	46
Steam, distilled turpentine, Savannah, gal.	41	41
Gum turpentine, N. Y., gal.	48	48
Gum turpentine, f.o.b. cars Savannah, gal.	38	38
Wood Rosin, N. Y., bbl.	$4.55	$4.78
Wood Rosin F, Savn'h, bbl.	$3.63	$3.90-4.00
Gum Rosin B, N. Y., bbl.	$3.50	$3.55
Gum Rosin B, f. o. b. cars Savannah, bbl.	$2.25	2.30
Rosin oil, pure, gal.	42–43	42–43
Rosin, oil, compounded, gal.	41–43	41–43
Pine Tar		
Kiln burnt	$9.00-10.00	$9.00-10.00
Retort, bbl.	$10.00-11.00	$10.00-11.00
Alcohol		
Denatured Formula 5, per gal., in bbls., car lots	39.6	39.6

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From All Fields

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For Domestic or Export

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Sales Form Simplifies Indiana Tax Refund

INDIANAPOLIS, Nov. 3.—Efforts are being made to simplify refund payments on the Indiana 4-cent tax on kerosine and fuel oils to save expense for the purchaser and for the state gasoline tax department.

The 4-cent tax on these petroleum products went into effect Aug. 19, 1932. The measure is designed to obtain complete reports on petroleum products that may be used for blending motor fuels to help stop tax evasion.

Purchasers of kerosine and fuel oils, using these products for other than highway purposes, are entitled to a refund. If the regular refund channels are followed considerable expense is involved in making payments on small claims. A housewife, for example, applying for a 4-cent refund on a purchase of a gallon of kerosine would have to pay about 30 cents for a notary, and for stamps and paper. In turn, the state would spend about 20 cents to send the 4-cent check.

A plan for a direct refund at the time of purchase has been worked out. The Indiana Petroleum Association recommends a form, approved by the state board of accounts, for a sales slip with the following statement:

"I, the undersigned, do hereby certify that I have this date purchased from the above company petroleum products as invoiced above. I further certify that the above products of kerosine, distillate and fuel oil only, are to be used for heat—— light—— power—— and not for the purpose of the propulsion of motor vehicles on the public highways of the state of Indiana."

This statement shows the amount of the tax not collected, and is attested by the agent or driver of the oil company.

Imperial Operates Far Northern Wells

TORONTO.—An oil well, capped since 1925, was opened by Imperial Oil Ltd. on the Mackenzie river the past summer to provide fuel for mining operations in the newly discovered Great Bear Lake gold, copper and silver mining area. It was operated successfully according to Ronald W. MacKinnon, manager for northern operations.

The company also operated a small refining plant near the well, producing about 20,000 gallons of fuel oil for mining operations, and 10,000 gallons of gasoline for marketing elsewhere.

The wells, some 53 miles north of Fort Norman and close to the Arctic Circle, are believed to be the farthest north producing wells in the world.

Consolidated Makes New Offer for Richfield

LOS ANGELES, Nov. 4—At the present rate of bidding by major oil corporations for the assets of Richfield Oil Co. of California and its subsidiaries, it appears not unlikely that the bondholders and various creditors will receive an appreciable portion of their claims.

Within less than a week of Standard Oil Co. of California's second offer for Richfield, Consolidated Oil Corp. increased its offer to $27,600,000 and precipitated a new series of conferences among the creditor groups.

Under the new proposal Consolidated offers to pay $25,000,000 in 6 per cent 20-year debentures and 400,000 shares of Consolidated common stock. It also agrees to provide upward of $10,000,000 in cash for settlement with non-assenting creditors and for preference claims and expenses. The total of the debentures would be reduced by the extent to which cash was used to satisfy these claims.

At the close of the week, the creditor committees, which include Richfield and Pan American bondholders and trade and bank unsecured creditors, were still debating the new standard and Consolidated offers.

Close of business Nov. 9 has been set as a tentative dead line for consideration of the two offers.

Institute Prints Cards Showing Gas Tax

NEW YORK—Small cards indicating the amount of money paid by the motorist for state and federal taxes on every 10 gallons of gasoline have been printed by the American Petroleum Institute.

These have been prepared with the idea of oil companies having their station attendants hand them out to customers when making change for gasoline purchases, according to Paul E. Hadlick, secretary of the marketing division. Mr. Hadlick believes that this method of calling the tax to the motoring public's attention saves time and expense. On the back of the card is printed the 1933 calendar.

Orders are being taken for these cards with figures for 10 and five-gallon sales, for various states. They will be made up in colors to match the buyer's sample.

"Ike" Is A Columnist

COLUMBUS, O.—I. G. Monroe, field representative of the Ohio Petroleum Marketers Association, conducts a department "As I Travel Around" of short personal items about Ohio marketers in the association's monthly magazine.

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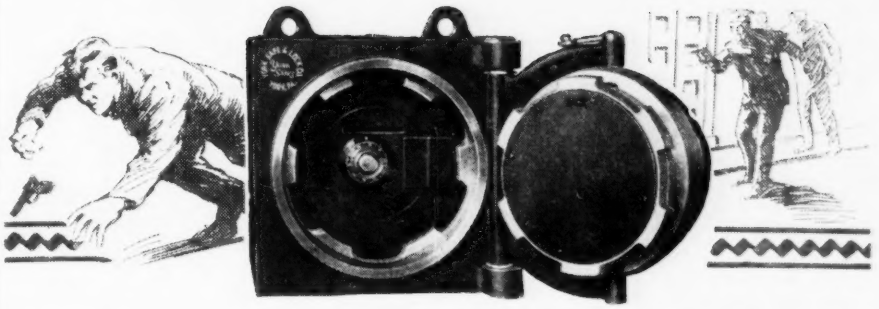

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UNGUARDED CASH presents a constant invitation to burglars and hold-up men. Regardless of your location, you cannot afford to be without adequate protection for your cash receipts.

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MANUFACTURERS OF THE WORLD'S GREATEST VAULTS

Transactions in Oil Shares on New York Stock Exchange

1931 High	1931 Low	1932 High	1932 Low	Listed Shares	Par Value	Company	Div. Rate Period	Last Div. Paid	Sales Shares	Week Ended Nov. 5 High	Low	Last	Week's Change
23	11¼	22¾	12	922,075	N.P.	Amerada Corp.	50cQ	Oct. 31, 32	3,600	19¾	19	19¾	— ¼
12⅜	1¼	4	¼	209,180	N.P.	American Republics Corp.	....	....	....	....	....	....	....
31	8¾	16½	6¾	2,240,000	$25	Associated Oil Co.	25cQ	Sept. 30, 32	....	....	....	....	....
23⅝	8⅝	21⅞	8⅝	2,696,652	25	Atlantic Refining Co.	25cQ	Sept. 15, 32	13,700	16⅜	15¼	16⅛	+ ⅛
14½	4	7	3⅜	2,257,740	5	Barnsdall Corp.	....	May 11, 31	4,200	4⅝	3⅞	4½	— ¼
25	8	..	..	2,060,966	25	California Petroleum Corp.	....	Jan. 1, 29	.....	....	....	....	....
10½	7½	12½	6¼	1,444,970	N.P.	Colonial Beacon Oil Co.	....	.....	.....	....	....	....	....
15⅞	4⅛	9	4	14,218,835	N.P.	Consolidated Oil Corp.	....	.....	28,700	6¾	6	6⅜	— ⅜
103	64	101	79	141,294	$100	do pfd.	$2Q	Aug. 15, 32	.....	....	....	....	....
12	5	9⅜	3⅝	4,722,301	N.P.	Continental Oil Co.	....	.....	7,500	6	5½	5⅞	0
47	9⅝	15½	4¾	413,333	N.P.	General Asphalt Co.	....	June 15, 32	900	7⅛	6¾	7	— ¾
68½	15¼	28¼	8¾	96,116	$100	Houston Oil Co.	....	.....	1,900	15	13⅛	15	+ ⅜
14⅛	3	5⅜	1⅝	677,019	25	do new.	....	.....	1,800	3	2⅞	3	0
4⅝	1⅛	2⅛	1	556,546	10	Indian Refining Co.	....	Dec. 15, 20	2,000	2	2	2	0
4½	1	2⅛	½	1,309,036	N.P.	Louisiana Oil Ref'g. Corp.	....	.....	.....	....	....	....	....
55	20	18	9½	40,000	$100	do pfd.	....	May 16, 32	.....	....	....	....	....
3¾	½	1½	⅜	330,000	N.P.	Maracaibo Oil Exploration Co.	....	.....	.....	....	....	....	....
171	50⅞	65	50	459,428	$100	Mexican Petroleum Co.	....	Apr. 20, 31	.....	....	....	....	....
100	100	105	100	120,000	100	do pfd.	$2Q	Oct. 20, 32	.....	....	....	....	....
16⅜	5	8⅞	4	1,857,912	N.P.	Mid-Continent Petroleum Corp.	....	Feb. 16, 31	1,300	6	5⅝	5⅞	+ ⅛
19½	5⅛	11	5	6,548,052	N.P.	Ohio Oil Co.	20cQ	Sept. 15, 32	5,900	9	8	8⅞	— ⅛
35½	20	34	6	1,000,000	$5	Pan American Pet. & Transp. Co.	‡20	Sept. 15, 32	300	12	12	12	0
36½	18	34⅞	7⅜	2,474,131	5	do B non-voting.	‡20	Sept. 15, 32	300	12¼	12	12¼	+ ¼
4¼	⅝	1¼	½	199,370	N.P.	Panhandle Prod. & Ref'g. Co.	....	.....	700	1	⅝	1	+ ½
20	5	10	3½	25,666	$100	do pfd.	....	July 2, 23	20	5	5	5	0
107⅜	27⅜	73⅜	3	2,396,084	N.P.	Petroleum Corp. of America.	....	June 1, 31	6,300	5¼	5	5¼	+ ⅛
16⅝	4	8⅛	2	4,421,910	N.P.	Phillips Petroleum Co.	....	Jan. 2, 31	11,800	6	5¼	5½	— ⅜
1½	¼	¾	¼	1,184,917	$25	Pierce Oil Corp.	....	.....	600	⅜	⅜	⅜	• 0
23⅜	3½	9	3½	150,000	100	do pfd.	....	Feb. 1, 22	100	5¼	5¼	5¼	— 1¼
3⅜	½	1⅝	½	2,500,000	N.P.	Pierce Petroleum Corp.	....	Feb. 16, 31	6,300	1	1	1	0
..	..	12½	9	1,050,000	$5	Plymouth Oil.	25cQ	Oct. 1, 32	800	9⅝	†9	9⅛	— ⅜
20⅜	4⅛	9½	3½	2,441,432	25	Prairie Oil & Gas Co.	....	Mar. 31, 31	100	6⅜	6⅜	6⅜	— ⅜
26½	5⅞	12¼	5¾	4,050,000	25	Prairie Pipe Line Co.	....	July 1, 31	100	9¼	9¼	9¼	0
6	1	1⅜	⅛	749,017	50	Producers & Refiners Corp.	....	Sept. 15, 23	.....	....	....	....	....
16	3	9⅜	1	56,907	50	do pfd.	....	May 4, 25	130	6¾	6½	6½	— ¼
11⅞	3¼	6½	2⅞	3,038,370	25	Pure Oil Co.	....	Sept. 1, 30	2,700	4⅛	3⅞	4	+ ⅛
101⅞	53½	80	50	130,000	100	do 8% pfd.	$2Q	Oct. 1, 32	20	67⅛	67⅛	67⅛	+ 2⅛
6⅜	⅜	1⅜	¼	2,126,250	N.P.	Richfield Oil Co. (California).	....	Sept. 1, 30	1,300	⅝	½	⅝	+ ⅛
42⅝	13	23¾	12⅛	558,343	$13.40	Royal Dutch Co. (N. Y. shares).	80½c	Aug. 5, 32	800	18½	18	18½	+ ¼
20⅜	5½	17½	6⅜	1,244,383	N.P.	Seaboard Oil Co. of Del.	10cQ	Sept. 15, 32	11,100	14	11	13½	— ⅛
34	5	15¾	8	62,825	£2	Shell Transport & Trading Co.	53c	July 22, 32	.....	....	....	....	....
10¼	2½	8¾	2½	13,070,625	N.P.	Shell Union Oil Corp.	....	June 30, 30	14,700	6¾	6	6¾	+ ¾
78	15	65¼	18	400,000	$100	do pfd.	....	July 1, 31	2,800	47½	45	47	+ ¾
11	3½	7½	3¼	869,271	10	Simms Petroleum Co.	....	Sept. 15, 30	800	5⅝	5	5	— ⅝
12⅞	2	5¾	2½	1,000,000	25	Skelly Oil Co.	....	Dec. 15, 30	200	3½	3½	3½	— ¼
62	10	33½	12	120,000	100	do pfd.	....	May 1, 31	500	28½	26	27	+ ¾
21	8⅜	12¼	5¼	31,764,443	25	Socony Vacuum Corp.	20cQ	Sept. 15, 32	39,500	9¾	7⅜	8	— 1¾
106	87½	99	81½	764,935	100	S. O. Export Corp. pfd.	$2.50S.A.	June 30, 32	700	97½	96⅞	97	0
51¾	23⅛	31⅞	15⅛	13,102,900	N.P.	S. O. California.	50cQ	Sept. 15, 32	12,800	25⅝	23⅜	25½	+ ¾
19	7¾	16½	7	320,000	$10	S. O. Kansas.	....	Mar. 16, 31	400	12	11¼	12	0
51½	26	37⅜	19⅞	25,735,466	25	S. O. New Jersey.	††25cQ	Sept. 15, 32	28,300	31	28⅞	31	+ ⅞
45¼	26¾	36½	24¾	1,544,365	N.P.	Sun Oil Co.	25cQ	Sept. 15, 32	100	36	36	36	— ¼
104½	75	91	68	100,000	$100	do pfd.	$1.50Q	Sept. 1, 32	.....	....	....	....	....
1¾	¼	3	¼	776,979	N.P.	Superior Oil Corp.	....	.....	1,900	1	¾	¾	— ¼
35⅞	9⅞	18¼	9¾	9,851,236	$25	The Texas Corp.	25cQ	Oct. 1, 32	21,100	14½	12¾	14½	+ ⅝
6½	1⅞	4	1½	930,454	10	Texas Pacific Coal & Oil Co.	....	Dec. 31, 29	200	2⅛	2	2	— ⅛
9	2⅛	5⅝	2	5,998,086	N.P.	Tide Water Associated Oil Co.	....	Feb. 16, 31	9,600	4	3½	4	+ ⅛
68	20⅛	60	20	695,494	$100	do pfd.	$1.50Q	Oct. 1, 32	300	45	45	45	+ 2
18	9⅞	10	5	2,191,954	N.P.	Tide Water Oil Co.	25cQ	Sept. 30, 32	1,000	9¾	9¾	9¾	— ¼
83	30	62	30	199,446	$100	do pfd.	$1.25Q	Aug. 15, 32	200	50	49	50	0
26⅝	11	15⅝	8	2,225,302	25	Union Oil Co. California.	25cQ	Aug. 10, 32	1,800	11¼	10⅛	10½	— ⅞
25⅛	16	19¾	11¾	1,254,048	N.P.	Union Tank Car Co.	35cQ	Sept. 1, 32	600	13⅛	13	13	— ⅝
7⅜	⅞	2¼	½	769,531	N.P.	Warner Quinlan Co.	....	July 3, 30	800	1	¾	¾	— ¼
9⅜	2⅝	8¼	2⅝	428,967	N.P.	H. F. Wilcox Oil & Gas Co.	....	May 10, 28	1,500	4¼	3⅜	3¾	— ¾

*New high. †New low. ††Also extra—S. O. New Jersey 25c. ‡Short rate due to change in payment date. Regular quarterly rate 25c. Total sales 254,770.

New York Bonds

Week Ending Nov. 5

	High	Low	Last	Change
Asso. Oil gold 6s	103	103	103	+ ¼
Atlantic Refg. deb. 5s	101⅛	101	101⅛	0
Cal. Pet. 5s	94½	93¾	93¾	— ⅞
Cal. Pet. 5½s	96	95½	96	0
General Pet. 5s	103	103	103	— ¼
Humble Oil & Refg. 5s	102½	101¾	102	0
Pan Amer. Pet. of Calif. 6s	38	28⅛	38	+10
Pan Amer. Pet. of Calif. 6s ctfs.	31	26⅝	30¾	+3¼
Phillips Pet. 5½s	70¼	69	70	+1
Pure Oil 5½s	74	73	74	+1½
Pure Oil 5½s	70¾	70	70¾	+ ½
Richfield Oil of Calif. 6s	33⅛	26½	32	+5¾
Richfield Oil of Calif. 6s ctfs.	33	26½	32	+4⅞
Shell Union Oil 5s	77½	74½	77	0
Shell Union Oil 5s w. war.	76½	77	80	+2¾
Sinclair Con. Oil 7s	96½	95⅛	96½	0
Sinclair Con. Oil 6½s	93½	91¾	92¾	+ ⅝
Sinclair Con. Crude 5½s	102¾	102	102⅛	— ⅛
Sinclair Pipeline	101¾	101	101⅜	+ ⅜
Skelly Oil 5½s	65¾	64	64¾	+ ¾
S. O. N. J. 5s	105½	103¾	104½	+ ½
S. O. N. Y. 4½s	96⅜	95½	96	— ¼
Union Oil of Calif 5s D	101⅜	100¾	101⅜	0
Union Oil of Calif. 5s C	98¼	98¼	98¼	+ ⅛
Union Oil of Calif. 5s war.	86	86	86	0
Warner-Quinlan 6s	16½	15	15	—3⅜
White Eagle Oil 5½s	103	102¾	103	+ ½

Tank Wagon Table

(Continued from page 61)

S. O. LOUISIANA

Stanavo Aviation Gasoline

Little Rock, Ark.	18	7	25
New Orleans, La.	17	*7	24
Shreveport, La.	17	6	23
Chattanooga, Tenn.	20	8	28
Memphis, Tenn.	18	8	26

Dealer and commercial consumer discount: 2c off posted retail t.w.

*Includes 1c parish tax.

CONTINENTAL OIL CO.

Denver, Colo.	14	5	19
Cheyenne, Wyo.	16	5	21
Helena, Mont.	19	6	25
Salt Lake City, Utah.	16	5	21
Albuquerque, N. M.	17	6	23
Boise, Ida.	16.5	6	22.5

S. O. CALIFORNIA

Stanavo Aviation Gasoline

Phoenix, Ariz.	15.5	6	21.5
Los Angeles, Cal.	13.5	4	17.5
San Francisco, Cal.	14	4	18
Reno, Nev.	17	5	22
Portland, Ore.	14	5	19
Seattle, Wash.	15	6	21
Spokane, Wash.	18.5	6	24.5

Note: Above prices are in tank trucks or iron barrels. For deliveries direct into airplane fuel tanks, 3c per gal. added beginning May 18 in California, May 24 in Oregon and Washington, and June 27 in Arizona and Nevada.

New York Curb Bonds

Week Ending Nov. 5

	High	Low	Last	Change
Cities Service 5s '50	42¼	35	36⅜	—6⅛
Cities Serv. 5s '66	44	36	38	—6⅜
Cities Serv. G. 5½s '42	52	48	48⅝	—4¼
Cities Serv. G. P. 6s '43	61⅝	59	60	—1⅝
Empire O & R 5½s '42	44¼	40¼	41	—3⅜
Gulf Oil 5s '37	100	99⅞	100	+ ⅛
Gulf Oil 5s '47	97⅝	97½	97½	— ¼
Independent Oil 6s '39	84¼	84¼	84¼	— ¼
Sun Oil 5½s '39	99⅞	99⅜	99½	+ ⅛
Sun Oil 5½s '34	100	100	100	+ ⅛
Valvoline Oil 7s '37	65	65	65	0

Naphtha Prices

Prices in Effect Nov. 7, 1932

	Oleum Spirits	V.M.&P. Naphtha	Cleaner Naphtha
Chicago	11.7	13.7	15.2
Detroit	14.5	16	16.8
Kansas City	†13	†14.5	†15.5
Milwaukee	*17.5	*19	*19.8
Minneapolis	**17.8	**19.3	**20.1
St. Louis	12.7	14.2	15
New York	...	14	15
Boston	...	16	16
Philadelphia	...	15	....

*Includes 4c state tax. †Includes 1c city tax.
**Includes 3c state tax.

Petroleum Spirits (Solvent)

Tank Cars (F.o.b. refinery or seaboard terminal)	
New York Harbor	9.50
Philadelphia district	9.50
Providence	9.50
Tank Wagon or Steel Barrels	
New York City	14
Syracuse	14
Rochester	14
Buffalo (net price)	13
Providence	16
Boston	16
Bridgeport	16
Newark	14
Philadelphia	14
Lancaster	17
Altoona	17
Baltimore	13

Note: 2c off above t.w. prices to large buyers in some instances.

NEW EQUIPMENT for NEW BUSINESS

PRICES for material and equipment discussed on this page and in the current advertising pages in NATIONAL PETROLEUM NEWS, in a great many cases, are BARGAINS.

They merit the attention TODAY of every oil company executive who faces the necessity—and few do not—of buying in the near future to replace equipment which is either just worn out, or which has become obsolete through new and improved designs, which operate at such a higher rate of efficiency, or at such a lower cost, that their purchase is an investment.

So much at rock bottom are prices for some of the equipment and material the oil industry continually uses in large volume, that the general advancement of raw material prices, which stage of general economic recovery the country now seems to have entered upon, must needs advance prices for the finished goods. The oil company executive should consider that TODAY'S PRICES WILL NOT LAST.

TO FULFILL the requirements of a safety code in Wisconsin which requires oil storage tanks of 21,000 gallons or less capacity to be fitted with an approved six-inch safety vent, the A. Y. McDonald Mfg. Co., Dubuque, Ia., manufacturer of oil marketing equipment, is pointing out to oil men the advantages of its safety tank vent officially approved by the Wisconsin superintendent of fire prevention. This vent is designed to take care of both vacuum and pressure, eliminating the need for any other vent on the tank. As a protection against flame entering the tank, the device is fitted with double screens made of two sheets of flat perforated brass, nickel-plated to prevent corrosion, and held in place by a special spring ring.

* * *

ALL the miscellaneous literature describing emulsifying agents, synthetic waxes, resins, etc., has been incorporated into a handy booklet for filing, by the Glyco Products Co., Inc., of Bush Terminal, Brooklyn, N. Y.

A number of new emulsion formulae and new products are included.

* * *

AN IMPROVED fluid hose, with solvent-resisting qualities through the use of a lining of Thiokol, has been developed by The DeVilbiss Co., Toledo, O.

The new hose not only resists oils of high penetrating qualities, the manufacturer claims, but withstands rigorous bending, twisting and wrenching. Absorption of lacquer thinner by this new hose, the company says, is only 1.8 per cent as compared with 30 per cent by ordinary composition hose. Its resistance to harsh solvents is reported good with no swelling, hardening, or other deterioration noticeable.

* * *

AN IMPROVEMENT in gate valve construction, wherein the bronze disc is installed through the flow passage eliminating the bolted or threaded bonnet, has been announced by Shand & Jurs Co., 920 Carlton, Berkeley, Cal.

Two sets of opposed threads operate to lift the disc twice as fast as the stem and with half as many turns as in ordinary valves, the manufacturer says. The disc is self-aligning and disc seats are integral with the flanged or threaded ends. Lapping of seats is easily accomplished.

The lightness of the valve has advantages for tank truck or suspended uses in plants and buildings. Interchangeable features make possible many connection arrangements.

* * *

A NEW "flat cured" fire hose which is being used successfully by municipal fire departments, has been introduced to the industrial field by The B. F. Goodrich Rubber Co., Akron, O., for use in plants having a fire protection problem.

The hose is manufactured flat and becomes round only when filled with water. Tests prove, the manufacturer says, that under five pounds pressure or more, this new hose offers no more resistance to the flow of water than the ordinary type. It is easier to coil and rack, occupies less space, cuts labor and handling, is neater and has greater life than round cured hose, the company claims.

THE OIL INDUSTRY EXCHANGE

Positions Wanted

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desires new connection. Plant superintendent experienced in installing and operating. Eight years practical experience compounding and manufacturing. Young, energetic and ambitious. References. No objection to foreign service.

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Miscellaneous

WHAT IT COSTS

"For Sale," "Wanted to Buy," "Help Wanted," "Business Opportunities."

"Miscellaneous" classifications, set in type this size without border—10 cents a word. Minimum charge, $3.00.

"Position Wanted" — 5 cents a word. Minimum charge $1.00.

Advertisements set in special type or with border—$4.00 per column inch.

Copy must reach us not later than Friday preceding date of issue.

All advertisements carried on this page are payable in advance

Standard Oil Stocks on New York Curb Market

1931 High	1931 Low	1932 High	1932 Low	Shares Issued	Par Value	Company	Div. Rate Period	Last Div. Paid	Transactions Week Ended Nov. 5 Sales Shares	High	Low	Last	Week's Change
16	6	7	6	40,000	$25	Borne Scrymser Co.	....	Oct. 15, 30	.....	.....	.....	.....	.....
56	30	35	17½	200,000	50	Buckeye Pipe Line Co.	$1Q	Sept. 15, 32	100	24½	24½	24½	+ 1½
129½	75	90	55	120,000	25	Chesebrough Mfg. Co.	††$1Q	Sept. 30, 32	.....	.....	.....	.....	.....
3½	1⅝	3⅛	1¾	5,977,873	N.P.	Creole Petroleum Co.	....	.....	2,200	2⅝	2½	2⅝	0
36	19	32	18	50,000	$100	Eureka Pipe Line Co.	$1Q	Nov. 1, 32	100	26¾	26½	26½	0
72	44¼	55	36⅝	2,974,645	25	Humble Oil & Refg. Co.	50cQ	Oct. 1, 32	200	41	40	40	0
18½	7⅜	10⅞	6¼	26,557,496	N.P.	Imperial Oil Corp. coup.	12½cQ	Sept. 1, 32	300	8½	7⅞	8⅛	0
18	7⅛	10⅛	6⅞	.....	N.P.	do registered	12½cQ	Sept. 1, 32	.....	.....	.....	.....	.....
21½	5½	7½	2⅞	300,000	$10	Indiana Pipe Line Co.	10cS.A.	May 15, 32	300	3¼	2⅞	2⅞	— ⅛
15½	7⅜	12¼	8	14,247,088	N.P.	International Petroleum Co.	25cQ	Sept. 15, 32	1,500	9⅞	9¼	9⅝	— ⅛
17½	5	10½	6	509,000	$12.50	National Transit Co.	20cQ	Sept. 15, 32	.....	.....	.....	.....	.....
14½	5⅞	6	2¼	100,000	5	New York Transit Co.	††20cQ	Oct. 15, 32	100	4	4	4	+ ⅛
35½	20	5	3	120,000	10	Northern Pipe Line Co.	25cS.A.	July 1, 32	.....	.....	.....	.....	.....
102⅞	67½	79	60	580,668	100	Ohio Oil Co. pfd.	$1.50Q	Sept. 15, 32	.....	.....	.....	.....	.....
15½	5½	10	2⅛	400,000	25	Penn Mex. Fuel Co.	50c	May 25, 32	.....	.....	.....	.....	.....
17	7	10	5⅛	100,000	10	Southern Pipe Line Co.	15cQ	Sept. 1, 32	.....	.....	.....	.....	.....
23⅞	9¼	16½	9⅝	1,200,000	25	South Penn Oil Co.	25cQ	Sept. 30, 32	.....	.....	.....	.....	.....
42½	25	37	27	35,000	50	South West Pa. Pipe Lines	$1Q	Oct. 1, 32	100	29¼	29¼	29¼	— 1¾
38½	13½	25⅛	13⅛	16,996,596	25	S. O. Indiana	25cQ	Sept. 15, 32	37,500	23¼	22⅝	23¼	+ ½
23⅝	12⅛	15⅞	8⅞	2,606,983	10	S. O. Kentucky	30cQ	Sept. 30, 32	1,200	11⅞	11¼	11½	0
36½	16	19	10¼	190,822	25	S. O. Nebraska	25cQ	Sept. 20, 32	.....	.....	.....	.....	.....
62½	23	30¼	15½	120,000	25	S. O. Ohio	37½cQ	Oct. 1, 32	100	22	21¾	21¾	— ¼
115¼	78½	87	78½	34,158	100	do 5% pfd.	$1.25Q	Oct. 15, 32	.....	.....	.....	.....	.....
10	1	2	1¾	.....	25	Swan Finch Oil Corp.	....	Jan. 15, 32	.....	.....	.....	.....	.....

*New high. †New low. ††Also extra—Chesebrough 50c. N. Y. Transit 10c.

Oil and Royalty Stocks on New York Curb

1931 High	1931 Low	1932 High	1932 Low	Par Value	Company	Transactions Week Ended Nov. 5 Sales Shares	High	Low	Last	Week's Change
1¾	¼	⅛	¼	N.P.	American Maracaibo	700	5/16	¼	¼	0
6½	1⅞	3¾	⅝	N.P.	Arkansas Nat. Gas	100	2⅝	2	2	— ¼
6¾	1⅞	3⅞	½	N.P.	do A	1,400	2	1⅞	2	0
7	3⅞	5⅝	1½	$10	do pfd.	200	4⅛	4	4	— ⅝
1	½	⅛	⅛	N.P.	Atlantic Lobos	.....	....	....	....	....
3¼	¼	⅝	½	$50	do pfd.	.....	....	....	....	....
16⅞	6¼	9¾	7	N.P.	British Amer. Oil coup.	.....	....	....	....	....
16¾	10	..	..	N.P.	do registered	.....	....	....	....	....
2⅜	¼	¾	¼	$¼	Carib Syndicate	200	⅜	⅜	⅜	— ¼
20¾	5	6⅞	1¼	N.P.	Cities Service	28,300	3½	3	3¼	— ⅛
84¾	35⅝	53⅝	10	$100	do pfd.	600	20	16¼	18⅝	— 1¾
7½	4	4½	1	$10	do pref. B	.....	....	....	....	....
84	41½	45	9	100	do pref. BB	80	15	14	14	— 3
3⅛	¼	1¼	¼	N.P.	Colon Oil Corp.	300	¾	⅝	⅝	— ⅛
7⅛	1	2⅛	½	N.P.	Columbia Oil & Gas vtc.	100	1	1	1	0
2¾	1	2	1	$1	Consolidated Royalty	100	1	1	1	0
3¾	⅜	2⅞	¼	N.P.	Cosden Oil	.....	....	....	....	....
15	1	8	1⅞	$100	do pfd.	200	2	2	2	+ ¾
⅝	⅛	⅝	⅛	N.P.	Crown Central Pet.	1,800	4¾	3⅛	4¾	+ 1⅝
5	1¾	7⅛	1⅝	N.P.	Darby Petroleum	400	3⅛	2½	2¾	— ⅜
6	1½	3	1	N.P.	Derby Oil & Ref'g.	.....	....	....	....	....
40⅛	25	24½	10½	N.P.	do pfd.	.....	....	....	....	....
76	25⅜	44½	23	$25	Gulf Oil Corp.	2,300	34¼	28	30¼	0
9¾	9¾	..	..	N.P.	Honolulu Oil Corp.	.....	....	....	....	....
16⅞	4¼	4½	1⅛	N.P.	Indian Ter. Ill'g. Oil A.	300	3	3	3	— ½
16⅞	5	4½	2½	N.P.	do B	.....	....	....	....	....
⅝	⅛	¼	⅛	$5	Intercontinental Pet.	.....	....	....	....	....
1⅞	¼	1	⅜	N.P.	Kirby Petroleum	200	⅝	⅝	⅝	— ⅛
1½	¼	¾	⅛	$25	Leonard Oil Devel.	1,100	¼	¼	¼	0
6¾	1½	3½	⅞	N.P.	Lion Oil Refining	.....	....	....	....	....
29	5½	11	3½	N.P.	Lone Star Gas	900	6½	6	6½	+ ⅛
½	⅛	..	..	$25	MacMillan Petroleum	.....	....	....	....	....
1¾	⅛	¼	⅛	1	Magdalena Syndicate	.....	....	....	....	....
5	1⅞	8	3¾	N.P.	Margay Oil Co.	.....	....	....	....	....
4¾	1½	3⅜	1½	N.P.	Mexico-Ohio Oil	.....	....	....	....	....
8⅞	1¼	2	½	N.P.	Michigan Gas & Oil	.....	....	....	....	....
4⅜	1½	2⅛	⅝	N.P.	Mid. States Pet. A v.t.c.	.....	....	....	....	....
1½	½	⅝	¼	N.P.	do B v.t.c.	100	⅜	⅜	⅜	+ ⅛
11	¾	2⅛	⅜	$5	Missouri-Kansas P.L.	1,300	¼	¼	¼	0
⅝	⅛	⅛	⅛	1	do B v.t.c.	.....	....	....	....	....
½	⅛	⅜	⅛	1	Mountain & Gulf	.....	....	....	....	....
5⅞	2	4½	2⅛	10	Mountain Producers	1,000	3⅜	2⅞	3	— ⅛
26½	9¾	14	8	N.P.	National Fuel Gas	500	12½	12⅛	12⅜	— ⅛
1½	½	⅞	⅜	$5	New Bradford Oil	.....	....	....	....	....
2⅛	¾	..	..	10	New England Fuel	.....	....	....	....	....
6½	6½	..	..	10	North Amer. Oil	.....	....	....	....	....
3¼	1⅛	1⅛	⅝	N.P.	North Central Texas	.....	....	....	....	....
2⅛	¼	⅜	⅛	N.P.	North European	300	3/16	⅛	⅛	— 1/16
5	⅜	5	¾	N.P.	Oil Stocks, Ltd. A	100	3⅜	3⅜	3⅜	— ⅛
4½	2	..	..	N.P.	do B	.....	....	....	....	....
15	2⅞	8	3⅛	N.P.	Pacific Western Oil	100	4⅜	4⅜	4⅜	— 1⅜
½	⅛	⅛	⅛	N.P.	Pandem Oil	.....	....	....	....	....
2	⅜	⅝	⅛	N.P.	Pantepec of Venezuela	.....	....	....	....	....
4½	¼	⅝	¼	N.P.	Producers Royalty	.....	....	....	....	....
83½	49⅞	59¾	40	$100	Pure Oil 6% pfd.	40	57	56	56	0
2½	⅝	1	⅛	N.P.	Red Bank Oil	.....	....	....	....	....
2½	¼	½	⅛	N.P.	Reiter-Foster Oil	.....	....	....	....	....
11	¼	1	¼	$25	Richfield Oil pfd.	500	¼	¼	¼	¼
6½	1¾	7½	1¼	N.P.	Root Refining pfd.	100	6½	6½	6½	+ 1⅜
3¾	½	½	½	$10	Royalty Corp. pfd.	.....	....	....	....	....
3	¾	1¼	⅝	N.P.	Ryan Consolidated	300	¾	†⅝	⅝	— ¼
1⅜	⅛	⅞	⅛	$10	Salt Creek Consol.	.....	....	....	....	....
7⅝	2¾	5½	2⅞	10	Salt Creek Prod.	500	4⅛	4	4	— ¼
7	1	1¼	½	25	Shreve. El Dorado P.L.	.....	....	....	....	....
7½	3½	4⅜	2⅞	N.P.	Southland Royalty	400	3¾	3¾	3¾	+ ⅜
5¾	¼	⅝	¼	$5	Sunray Oil	500	⅜	⅜	⅜	0
12⅞	2½	10½	4½	N.P.	Texon Oil & Land	600	7	6¾	6¾	— ¼
24½	9½	13½	7	$25	Union Oil Associates	200	9¾	9¾	9¾	— ¼
1⅞	¼	⅛	⅛	5	Venezuela Petroleum	600	5/16	¼	5/16	— 1/16
3½	1⅛	2⅛	1¼	1	Woodley Petroleum	500	2	2	2	0
2¼	¼	⅝	⅛	N.P.	Y Oil & Gas	.....	....	....	....	....

*New high. †New low.

Oil Dividends

Declared Last Week

Company and Period	Amount	Stock of Record Payable
Cumberland Pipe Line liquidating	$2.50	Dec. 15 .....
Imperial Oil q.	12½c	Dec. 1 Nov. 15
McColl Frontenac q.	15c	Dec. 15 Nov. 15
Northern Pipe Line	25c	Jan. 2 Dec. 16
Socony-Vacuum q.	10c	Dec. 15 Nov. 18
S. O. California q.	50c	Dec. 15 Nov. 15
S. O. Indiana q.	25c	Dec. 15 Nov. 15
S. O. Nebraska q.	25c	Dec. 20 Nov. 26
S. O. New Jersey q.	25c	Dec. 15 Nov. 15
do extra	25c	Dec. 15 Nov. 15
Union Tank Car q.	35c	Dec. 1 Nov. 15

Awaiting Payment

Nov. 5, 1932

Company and Period	Amount	Stock of Record Payable
Consolidated Oil pfd. q.	$2	Nov. 15 Nov. 1
Indiana Pipe Line s.a.	10c	Nov. 15 Oct. 21
do extra	5c	Nov. 15 Oct. 21
Southern Pipe Line q.	15c	Dec. 1 Nov. 15
Sun Oil q.	25c	Dec. 15 Nov. 25
do extra stock	3%	Dec. 15 Nov. 25
do pfd. q.	$1.50	Dec. 1 Nov. 10
Tide Water Oil pfd. q.	$1.25	Nov. 15 Oct. 15
Union Oil q.	25c	Nov. 10 Oct. 17
Union Oil Associates q.	25c	Nov. 10 Nov. 17

Paid Last Week

Company and Period	Amount	Date Paid
Amerada Corp. q.	50c	Oct. 31
Eureka Pipe Line q.	$1	Nov. 1
Gilmore Oil q.	20c	Oct. 31
Salt Creek Prod. q.	25c	Nov. 1

Pittsburgh Stock Exchange

Transactions Week Ended Nov. 4, 1932

	Sales	High	Low	Last	Change Over Week
†Col. Gas & Elec.	748	13⅛	11	12⅜	— ⅜
†Lone Star Gas	6,243	6½	5¾	6¼	— ⅜
Phoenix Oil	1,000	.07	.07	.07	—.03
Plymouth Oil	610	10	9	9	—1
Shamrock Oil & Gas	10	1	1	1	0
‡Standard Oil of N. J.	297	30⅜	29⅛	30¼	0
‡Western Public Service	2,000	5¼	5	5¼	0

†Payable in new preferred stock; ‡Unlisted.

NEW PATENTS

Prepared by R. E. Burnham, patent and trade-mark attorney, 1343 H Street, N. W., Washington, D. C., from whom copies may be obtained at the rate of 25c each. State number of patent and name of inventor when ordering.

October 25, 1932

REFINING

Process for hydrocarbon oil conversion—Jean D. Seguy, Chicago, Ill., assignor to Universal Oil Products Co. Filed Jan. 27, 1927. No. 1,884,886.

Treatment of hydrocarbon oils—Jean D. Seguy, assignor to Universal Oil Products Co. Filed Jan. 10, 1929. No. 1,884,887.

Process for treating petroleum oil—Claude F. Tears, Chicago, Ill., assignor to Universal Oil Products Co. Filed June 18, 1923. No. 1,884,915.

Method of treating clay—Charles V. Zoul, Los Angeles, Calif., assignor to Coen Companies, same place. Filed July 20, 1929. No. 1,884,954.

PRODUCTION

Oil-well control—Eva Marler, Oklahoma City, Okla. Filed Jan. 5, 1932. No. 1,884,040.

Drill—Louis M. Pearce and Walter M. Church, Houston, Tex. Filed Apr. 14, 1931. No. 1,884,182.

Casing-head equipment for pneumatic swabs—Norman H. Ricker, Houston, Tex., assignor to Hughes Tool Co. Filed Aug. 31, 1931. No. 1,884,245.

Method and apparatus for producing oil (control of flow from oil-wells)—Irving B. Williams, Tulsa, Okla. Filed Apr. 23, 1930. No. 1,884,459.

Automatic stage-lift flowing apparatus for wells—Alexander Boynton, San Antonio, Tex. Filed May 25, 1927. No. 1,884,548.

Stage-lift flowing device—Alexander Boynton, Filed Oct. 19, 1927. No. 1,884,549.

Stage-lift flowing device—Alexander Boynton. Filed Nov. 4, 1927. No. 1,884,550.

Casing-head — Alexander Boynton. Filed Dec. 6, 1927. No. 1,884,551.

Detachable drill-bit.—Charles W. De Witt, Oakland, Calif. Filed July 31, 1930. No. 1,884,601.

Drilling mechanism—Elmer G. Gartin, Claremont, N. H., assignor to Sullivan Machinery Co., same place. Filed Aug. 27, 1927. No. 1,884,648.

Drilling mechanism—Elmer G. Gartin, assignor to Sullivan Machinery Co. Filed Oct. 27, 1924. No. 1,884,649.

Drilling apparatus—Harry C. Johansen, Michigan City, Ind., assignor to Sullivan Machinery Co. Filed Nov. 17, 1926. No. 1,884,716.

Chuck mechanism—Harry C. Johansen, assignor to Sullivan Machinery Co. Filed Apr. 8, 1930. No. 1,884,717.

Apparatus for simultaneously controlling oil mine wells—Leo Ranney, New York, N. Y., assignor to Standard Oil Development Co. Filed Mar. 22, 1929. No. 1,884,858.

Method of and apparatus for installing mine wells—Leo Ranney, assignor to Standard Oil Development Co. Filed Feb. 12, 1930. No. 1,884,859.

Pipe-joint-coupling device—Warren A. Ross, Long Beach, Calif. Filed Apr. 13, 1927. No. 1,884,874.

Drill-rod-valve mechanism—Eugene Whinnen, Okotoks, Alberta, Canada, assignor to Sullivan Machinery Co. Filed Jan. 17, 1931. No. 1,884,940.

Seal-ring for conical cutters—Henry T. Baggett and Lewis E. Garfield, Houston, Tex., assignors to Hughes Tool Co. Filed Oct. 19, 1931. No. 1,884,965.

MISCELLANEOUS

Gum inhibitor (for gasoline)—William S. Calcott, Penns Grove, N. J., and Ira E. Lee, Wilmington, Del., assignors to E. I. du Pont de Nemours & Co. Filed Mar. 25, 1930. No. 1,884,559.

Non-gumming gasoline and mode of preparing—Everett A. Sollmann, Washington, D. C., assignor to American Lecithin Corp., Atlanta, Ga. Filed Oct. 28, 1931. No. 1,884,899.

Gasoline-vending machine—Merton W. Farnhamm Batavia, N. Y. Filed Sept. 29, 1928. No. 1,885,091.

November 1, 1932

REFINING

Process for stabilizing gasoline and the like—Gustav Egloff, Chicago, Ill., assignor to Universal Oil Products Co. Filed Nov. 4, 1929. No. 1,885,190.

Method and apparatus for producing motor fuel from residual oils—Stephen Swartz, Chicago, Ill., assignor to Jenkins Petroleum Process Co. Filed May 28, 1928. No. 1,885,387.

Process for treating hydrocarbon oils—Arthur Lazar, Associated, Calif., assignor to Associated Oil Co., San Francisco, Calif. Filed Dec. 17, 1927. No. 1,885,524.

Compound for purifying oils—Henry H. Moreton, Santa Monica, Calif. Filed Oct. 8, 1928. No. 1,885,619.

Oil-converter—Audley E. Harnsberger, Chicago, Ill., assignor to Gyro Process Co. Filed Jan. 25, 1930. No. 1,885,716.

Tube connection for oil-refinery fittings—Carlyle V. Stewart, Springfield, Ohio, assignor to Ohio Steel Foundry Co., Lima, Ohio. Filed Nov. 10, 1930. No. 1,885,779.

Method of treating liquid hydrocarbons—Alexander S. Knowles and Charles W. Andrews, Chicago, Ill., assignors to Tar & Petroleum Process Co. Filed Oct. 27, 1928. No. 1,885,920.

Process of treating petroleum oils—Frank F. Gorman, Bristow, Okla. Filed Dec. 22, 1926. No. 1,886,008.

Process for treating hydrocarbon oils—Charles J. Greenstreet, New York, N. Y. Filed Aug. 9, 1920. No. 1,886,093.

Fractional distillation process and apparatus—Walter G. Williams, Plainfield, N. J. Filed June 6, 1929. No. 1,886,142.

Method of refining liquid hydrocarbons—Ernest B. Miller, Baltimore, Md., assignor to Silica Gel Corp. Filed Mar. 3, 1925. No. 1,886,260.

Method of refining liquid hydrocarbons—Ernest B. Miller and Gerald C. Connolly, Baltimore, Md., assignors to Silica Gel Corp. Filed June 17, 1931. No. 1,886,261.

Distillation of carbonaceous materials—Harold Nielsen, Bromley, and Byran Laing, Petty France, Westminster, England. Filed Nov. 21, 1927. No. 1,886,262.

Treating oils and composition therefor—Elliott Morrill, Chicago, Ill. Filed Feb. 8, 1929. No. 1,886,293.

Removal of wax from hydrocarbon oils—Hugh Lowery, Alton, Ill., assignor to Standard Oil Co. (Ill.) Filed Oct. 27, 1928. No. 1,886,344.

PRODUCTION

Submerged alternating current drive—(well pump). Matthias Rehse, Rotenhan, Germany. Filed Oct. 22, 1927. No. 1,885,140.

Rotary drill—Jeners Johnson, Los Angeles, Calif. Filed April 3, 1931. No. 1,885,266.

ADVERTISERS IN THIS ISSUE

This index is published as a convenience to the reader. Every care is taken to make it accurate, but National Petroleum News assumes no responsibility for errors or omissions.

American Can Co. 2
American Flange & Mfg. Co. 4
Anderson-Prichard Oil Corp. ..... Third Cover

Berry Sons' Co., Inc., James B. 66
Bethlehem Steel Co. 64

Calumet Refg. Co. 59
Cincinnati Ball Crank Co. 59
Classified Advertisements 69
Col-Tex Refg. Co. ..... Third Cover
Conewango Refg. Co. 44

Danciger Refineries 57
Daugherty & Son Refg. Co., W. H. 57
Deep Rock Oil Corp. 3
Dyestuffs & Chemicals, Inc. 40

Edwards Mfg. Co. 52

Franklin Creek Refg. Corp. 57
Freedom Oil Works Co. 62

Goodyear Tire & Rubber Co. 29
Granberg Meter Corp. 57
Gulf Refg. Co. 64

Mid-West Forging Co. 53

Nat'l Petroleum Mutual Fire Insurance Co. 40
National Petroleum News 66
National Refg. Co. 61

Pennsylvania Lubricating Co. 1
Pennsylvania Refg. Co. 55
Pure Oil Co. ..... Fourth Cover

Refiners Marketing Co., Ltd. 67
Roper Corp., Geo. D. 40

Skelly Oil Co. ..... Second Cover

Universal Oil Products Co. 25

Viking Pump Co. 72

White Eagle Oil Corp. 43

York Safe & Lock Co. 67

"You make 'em too good,"

Said the man in the Pullman

ONE of our representatives recently fell into a conversation with a fellow-traveler aboard a Pullman smoking compartment.

This representative, with the typical enthusiasm of all Viking men toward their product, told this traveler of Viking's remarkable length of life and trouble-free service. About one large American oil company that had purchased over a million dollars worth of Viking Pumps since 1915 . . . and had spent less than 1% of this amount for repairs over the same period.

The stranger mused a moment and then remarked, "You make 'em too good."

There may be some who share this fellow's opinion. Happily we don't. In our opinion Viking Pumps can't last too long. Nothing will please us more than to arrive at our 35th birthday (which is still years away) and discover that Viking Pumps of that age are still on the job.

At any rate the point is this. We make Viking Pumps just as good as we know how to make them. We expect to keep on making them on this same quality basis. If we can add still further years to Viking's present long span of life you may be sure we will.

Really, it's surprising how many Viking Pumps we have sold for expansion . . . how very few for replacement. If your're looking for a pump that will wear service stripes gracefully . . . that will stay out on the firing line . . . away from the repair shop . . . we really believe you are looking for our pump . . . the VIKING.

May we tell you more about it? Write today for FREE Folder BS: 402:32.

VIKING PUMP COMPANY

CEDAR FALLS, IOWA

VIKING PUMP DISTRICT OFFICES

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